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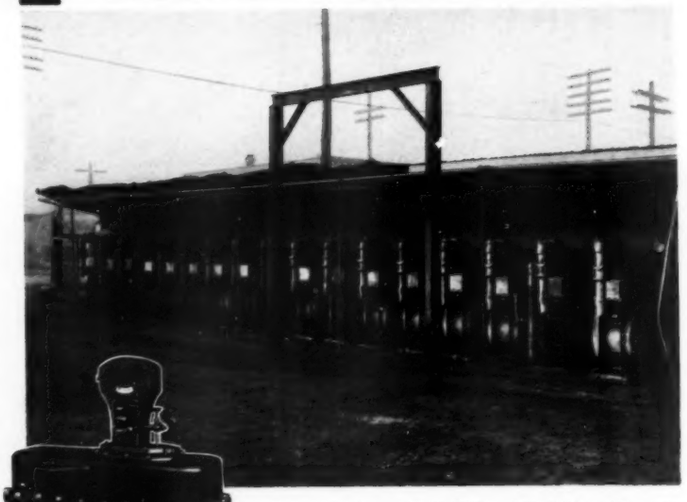

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TIMKEN TAPERED ROLLER BEARINGS

Marketer Code Is Seen as Hopeful Sign

DEEPENING CONVICTION that the marketing division must undergo a vigorous course of treatment before the oil industry as a whole can hope for complete restoration to health is seen in the voluntary code of fair practice agreed upon in Chicago by several hundred men representing the various interests involved. To be sure, the industry at large in the area affected is to sit in judgment on the code, which then, after being emended to meet differing views so far as possible, is to be submitted to the tender mercies of the Federal Trade Commission. Nobody knows what the outcome will be, but the movement is significant of the larger place which oil men are according the marketing branch. Added importance is lent by the organization a week earlier of the Independent Refiners Association of California, with a view of stabilizing prices on the Pacific Coast.

For the first time since September 1, 1935, daily crude production in California dropped below the 600,000-barrel mark, thus recording quick and positive results from the curtailment agreement in that state. The refined market was stronger in consequence. It was expected California's production would be down to the new allowable, 537,000 barrels, by February 15.

Gusher production in the Wilcox sand of the old Billings pool in Noble County, Oklahoma, was opened by a test drilled by the Phillips and the Shell companies. It is the first important strike in the state this year and is expected to start active play. The first well to find Ordovician production in the old Healdton field, Carter County, had a hole full of oil at total depth of 3,006 feet in the Simpson formation and was shut in for tankage.

Production 2,773,905
Decrease 56,319

A new oil field in northwestern Titus County, Texas, is foreshadowed by a Trinity wildcat a mile southeast of Talco which made 700 feet of oil on a 25-minute drill stem test through three-eighths inch chokes at 4,166-4,208 feet.

Four wildcats, each opening new production, were reported in Kansas—one southeast of Leon in Butler County; one in Cowley County, 7½ miles north of Winfield; one in Barton County, 3 miles east of Claflin, and one in Rooks County, the farthest north strike in the state.

Possibility of extending the Rodessa pool 2 miles to the northeast is seen in a test by Lion Oil Refining Company, which was coring for the Dees sand at 6,092 feet and had the earmarks of a producer.

Cooperation among Mid-Continent refiners to keep output in line with sharply reduced gasoline consumption was reported. Gratified comment was stirred by some independent refiners who closed their plants rather than add to surplus.

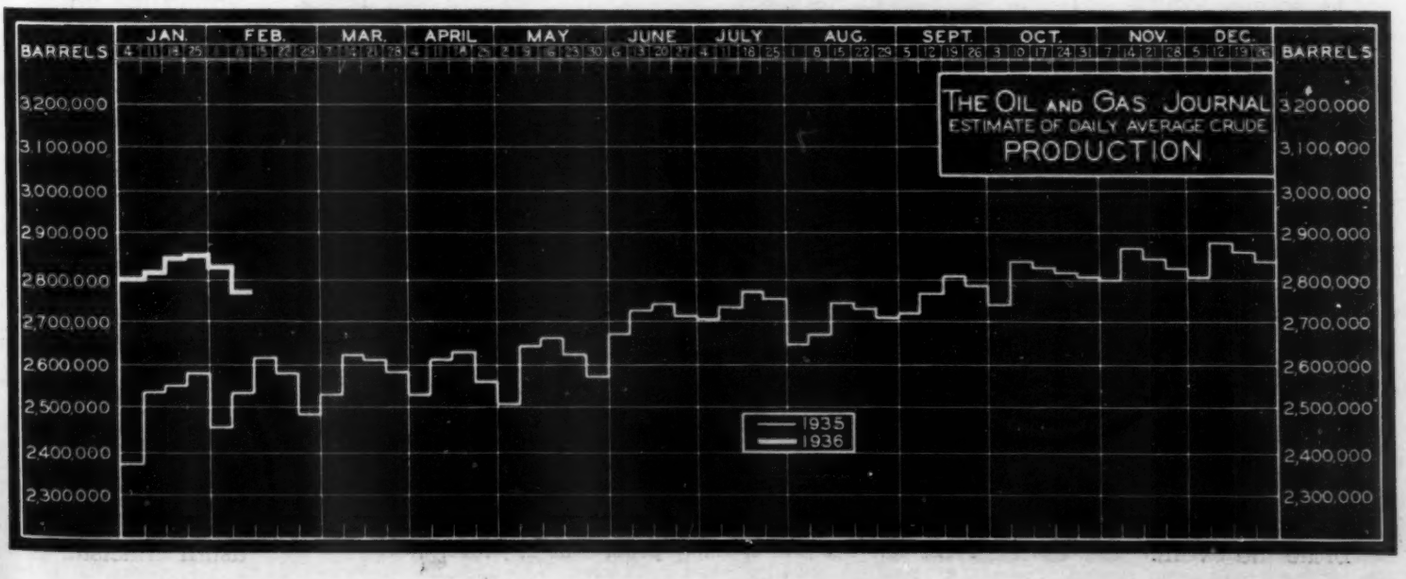
Daily Average Production for Week

	Feb. 8 1936	Feb. 1 1936	Feb. 9 1935
Oklahoma City	139,150	137,725	130,475
Seminole	86,150	90,475	81,675
Remainder of State	262,275	269,075	243,375
Total Oklahoma	487,575	497,275	455,525
East Texas	436,803	438,298	465,508
West Texas	159,952	147,902	150,273
North Central Texas	81,847	81,897	82,715
Texas Panhandle	54,497	59,653	59,125
East Central Texas	44,554	44,250	52,274
Gulf Coast—Texas	212,497	205,647	175,775
Southwest Texas	69,548	68,799	58,675
Total State of Texas	1,059,698	1,046,446	1,044,345
North Louisiana	61,305	57,365	22,805
Gulf Coast—Louisiana	133,250	131,298	91,275
Total Louisiana	194,555	188,663	114,080
Santa Fe Springs	47,750	53,850	39,600
Long Beach	73,850	76,250	69,500
Mountain View	32,100	35,100	19,500
Kettleman Hills	92,000	98,650	69,250
Remainder of State	382,550	411,800	329,900
Total California	628,250	675,650	527,750
Kansas	131,575	137,175	139,700
Arkansas	29,670	30,175	31,225
Eastern fields	99,000	102,700	102,000
Michigan	33,772	40,180	35,817
Rocky Mountain area	109,810	111,960	96,120
Total United States	2,773,905	2,830,224	2,546,562

Crude Oil Stocks in U. S.

(BUREAU OF MINES ESTIMATES)

Week ending January 25, 1936	313,239,000 bbls.
Week ending January 18, 1936	298,136,000 bbls.
Week ending January 26, 1935	337,442,000 bbls.



SPARKS FROM THE NEWS

Costs

P.A.B. revised estimates on cost of production will probably be revised further by the industry.

Revival

The record demand, with exports behind their peak, emphasizes the gain in the home market.

Fade-out

Observation by the federal investigator that "the volume shipped from Texas ports does not necessarily mean 'hot' oil" shows how times have changed.

Awakened

Class I railroads doubled their number of trucks in a year and increased the number of their buses. Better late than never.

Myopia

With Louisiana allowable 40,000 bbls. higher than the Bureau of Mines recommendation there is need for revision somewhere.

Agricultural

Deeper discoveries, as in the Healdton field and elsewhere, may renew faith in a "farmer's sand."

Shelved

Geneva's study of sanctions will outlast the war.

Threat

Governor Marland's proposal to test the "law of capture" in the courts has interesting possibilities.

Unitization

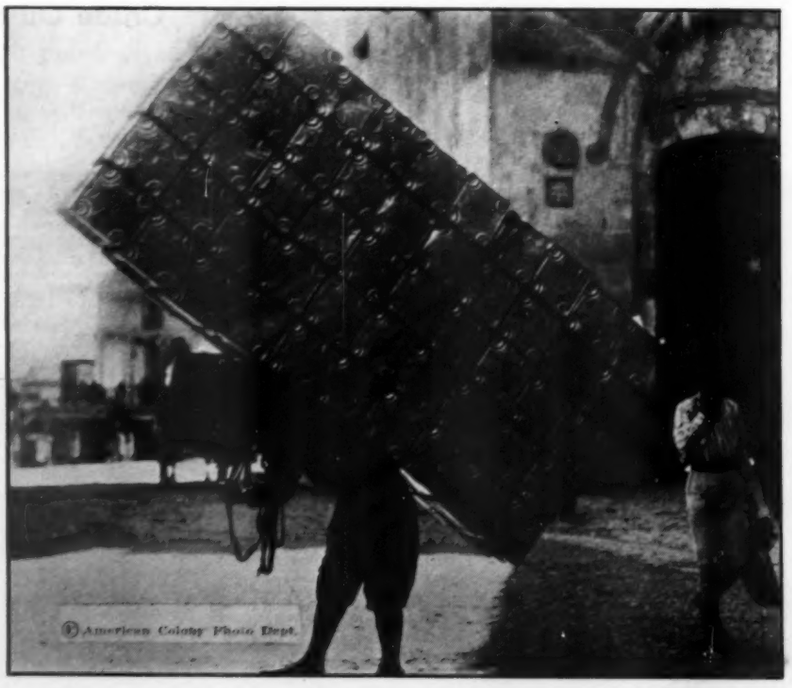
The federal court ruling in Texas that if a man recovers his fair share of oil there is no basis for claiming confiscation by refusal of a permit is another nick in the "wild game" theory.

Rainbow

Reports from Washington are that congress is so anxious to get home to fix fences it will act only on what it has to at this session. The less the better.

Twins?

Mount Pleasant, Titus County, Texas, bobs up to salute Mount Pleasant, Mich. Operators think both well named.



Porter carrying load of empty petrol cans in Jerusalem

Caution

Kansas is rejoicing because its oil crop is rivaling the value of its wheat crop. It should remember the oil crop is irreplaceable.

Date

February 25 will be the anniversary of the original 1-cent gasoline tax in Oregon in 1919, but the oil industry will not celebrate the event.

Self-made

The new marketing code drafted at Chicago, representing the experience of those making it, ought to escape usual criticism.

Few Large Pools in Five Years; Vital Need for Exploration

Compiled from latest reports by the staff correspondents of The Oil and Gas Journal

The discovery of so few pools of large production in the past five years, coupled with the fact that during the same period 4,426,106,168 bbls. of oil has been taken from wells, has emphasized the necessity of a widespread exploration for new reserves.

The production of the United States in 1935 was 144,817,301 bbls. more than in 1930, but the production of East Texas, which was discovered late in 1930 was 175,044,051 bbls. more in 1935 than in 1930. This leaves all the other fields in the United States producing in 1935, 30,226,750 bbls. less than in 1930, notwithstanding the discoveries that have been made since the beginning of 1931.

Twenty-two of the largest fields outside of East Texas, all of which in 1930 or 1935, or both, produced 10,975,000 bbls. or more in a year, an average of 30,000 bbls. or more per day, show a net decline in the five-year period of 128,587,728 bbls. Among them are seven fields that show an increase.

A number of large fields in the country were curtailed last year, but on the other hand the two largest, East Texas and Oklahoma City, are producing all they can, if the best engineering usage is continued. Much more oil can ultimately be taken from those fields under present operating conditions than would be recovered if they were opened up. This applies also to other fields which are kept partly "bottled," like Hobbs, New Mexico; Fitts, Oklahoma; Yates, Texas, and Oxford, Kansas, and a host of smaller prorated pools in several states.

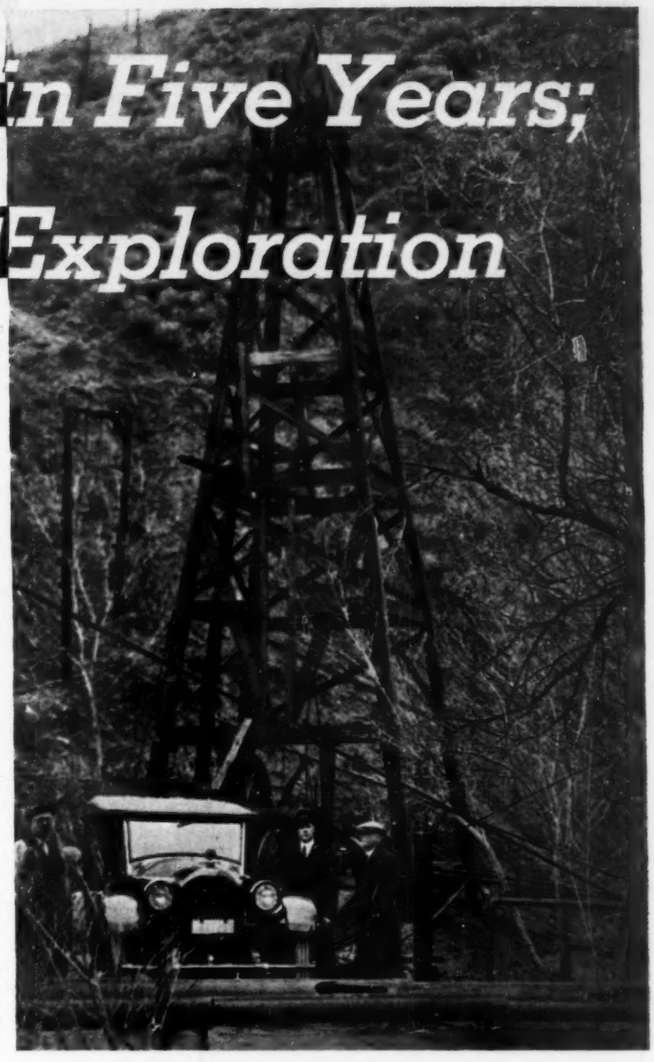
The fact that the fields now under curtailment cannot produce much more than at present without reducing their ultimate production puts them out of the dangerous class. With the possible exception of Rodessa, Louisiana, where a proration is being very generously administered by state authorities, there is little chance of serious overproduction. That being the case there is an admitted need of new reserves and the experience of the past five years shows they are not easy to find in sizable form. Few if any of the last five years' crops of pools will reach the 100,000,000-bbl. class in ultimate production. It takes dozens of small pools to equal the production of one like Cushing, Burbank, Yates, Hendrick and others like them, not to mention the unprecedented East Texas field.

The whole production picture points to the necessity of exploration campaigns in every oil state, and in nonoil states where there are possibilities of the existence of oil. The industry is aware of this and is already engaged in widespread wildcatting which will be carried on this year.

The oil industry, from the beginning of 1931 to the end of 1935, drilled 79,382 wells in the United States of which 52,920 were oil wells and 19,744 were dry holes. Most of the oil wells were drilled in fields discovered before 1931, 19,950 of them in East Texas, alone, but many of the nearly 20,000 dry holes were drilled in search of new pools, or extensions which they failed to find.

The number of pools discovered in the last five years that have attained the major class of 10,000 bbls. a day, or more, have been few. The largest discovery was Conroe, in Texas, which is now producing around 35,000 bbls. per day and is on a definite decline.

Seventeen other pools now in the 10,000-bbl. per day class, discovered since 1930, and their present day production, include Greta, Texas, 15,000 bbls.; Thompson, Texas, 10,800 bbls.; Grand Falls, Texas, 10,500 bbls.; Gillis, Louisiana, 12,000 bbls.; Iowa, Louisiana, 20,000 bbls.; Bosco, Louisiana, 15,000 bbls.; Leesville, Louisiana, 13,500 bbls.; Rodessa, Louisiana, 36,800 bbls.; South Burbank, Oklahoma, 12,250 bbls.; Lucien, Oklahoma, 11,000 bbls.; Fitts, Oklahoma, 39,000 bbls.; Fish, Oklahoma, 10,000 bbls.; Eunice, New Mexico, 12,500 bbls.; Burrton, Kansas, 13,000 bbls.; Mountain View, California, 35,000 bbls.; Porter, Michigan, 17,000 bbls.; Crystal-Montcalm, Michigan, 17,000 bbls. These 17 pools are producing approximately 345,000 bbls. per day at this time, or about 100,000 bbls. per day less than the single East Texas field.



This well in the Pico Canyon, California, completed in 1875, made that state an oil region. The state has since produced over 4,420,000,000 barrels of oil

Crowd watching "Dad" Joiner open the East Texas field in the fall of 1930. Twenty thousand wells have since been drilled in the field

If we consolidate the production of certain closely grouped new pools in Kansas, Texas, New Mexico and Michigan, the combined new production is considerable. The Mirando district in Southwest Texas increased from an average of 11,225 bbls. per day in 1930 to 23,148 bbls. per day in 1935 through discoveries; Rice County, Kansas, increased from 1,234 bbls. a day as an average for 1930 to 22,109 bbls. a day in 1935, and Russell County, Kansas, from 3,037 bbls. a day as an average for 1930 to 11,080 bbls. a day in 1935; Michigan jumped from 9,700 bbls. a day to an average of more than 43,200 bbls. and a peak production of over 50,000 bbls. a day through discoveries in the five-year period. Lea County, New Mexico, nearly doubled its production in five years through the opening of pools like Monument, Cooper and Eunice and the development of the Hobbs pool.

Oklahoma

Southeastern Oklahoma was the big question mark in wildcat circles in the Sooner state at the beginning of 1936, a year that is expected to see the search for oil carried into far-flung sections of the state that never previously have yielded production. Three key tests that are of special interest may be the forerunners of an intensive wildcatting campaign in the southeastern counties. In McIntosh County, along the northern edge of the southeastern section, Indian Territory Illuminating Oil Co. No. 1 Tancred, in section 9-9-14, west of Eufaula, already has found gas pro-

duction and is going deeper in quest of oil. In Coal County, on the western edge of the southeastern district, Carter Oil Co. and others No. 1 Thompson, C S half NE NW section 34-2-9, had a slight showing of oil as it drilled in Dolomite around 6,910 feet, reviving hopes that this test which previously has shown water may yet be an oil producer. Another Coal County test that may have a big bearing on future activity in the area, the Shell Petroleum Corp. No. 3 Hill, SE SE NW section 30-3-10, had not gone deep enough to provide any information.

Southern Oklahoma undoubtedly will be a "hot spot" with wildcatters during the year. In Love County, where many lease blocks were assembled in 1935, already has three wildcats under way. Several deep tests already drilling or proposed in Carter and Stephens Counties, following the trend from the Grayson County, Texas, area, across eastern Love County, northwestward through Carter and Stephens Counties. Several tests are due to seek the deep pay, following the discovery in the Carter Oil Co. and others No. 1 Thompson in the old Fox field of Carter County.

Central Oklahoma, especially Garvin, McClain and Cleveland Counties, have already had several wildcat tests but are almost certain to get more, despite disappointments in 1935. The play has cooled off considerably in southwestern Oklahoma, as a result of numerous failures, but a few strikes have been sufficient to assure a continuation in that area. In western Oklahoma, tests are being drilled in Beckham and Roger Mills Counties that are being watched closely. Scattered wildcatting will continue in northern and northwestern Oklahoma, with current tests in Alfalfa, Garfield, Grant and Kay Counties holding interest. Anything is liable to happen in Caddo County, where deep drilling continues in the Binger area, and in Oklahoma, Logan, Pontotoc, Pottawatomie, Lincoln and other older areas. Far up in the Panhandle, in Beaver County, a deep test is being drilled that may herald an extensive campaign if it has any favorable shows.

Western Kansas

The trail of the wildcatter will lead into many western Kansas counties in 1936, as oil men seek new production to offset declining reserves and stocks. Extension of pipe lines into some of the newer areas will serve as an incentive for new exploration in the western counties, as well as the growing demand for new reserves. The past year was one of the busiest in Kansas oil history, but all indications now are that 1936 will surpass the record of 1935, when 50 Kansas wildcats found production.

Already, material is on the ground for a far western outpost in Kearny County, only one county removed from the Colorado line. The vast area between this test and production in the west central part of the state is considered prime wildcat country and probably will see numerous tests started in the next 12 months.

In the west central counties a continuation of the intensive drilling campaign of 1935 through 1936 is assured, many wildcat tests already being under way and others projected. Shell Petroleum Corp.'s recent strike in the Reece area of southwestern Reno County is expected to be followed by considerable activity in the adjacent areas of Reno, Kingman, Pratt and Stafford Counties. The latter two counties seem due for the most intensive wildcatting era they have known.

Rice, Russell and Barton Counties were setting the pace for wildcat activity as the year opened, with numerous tests drilling. The recent strike of F. A. Gillespie & Sons with their No. 1 Low, NE NE NW section 12-6-18w, north of Stockton, was encouraging to wildcatters in Rooks County and was due to spur activity in the northern tier of counties. Ellis County, which had three strikes in 1935, is one of the most heavily leased counties in Kansas and predictions are being made that it will vie with Rice and Russell Counties in new work before the end of 1936. Trego County to the west also was expected to share in the big play.

Down nearer the Oklahoma line, Cowley, Sumner, Sedgwick and Butler Counties, among others, will continue to be favorite spots with the oil men who never quit looking for new pools.

Net Decline in 22 Large Fields

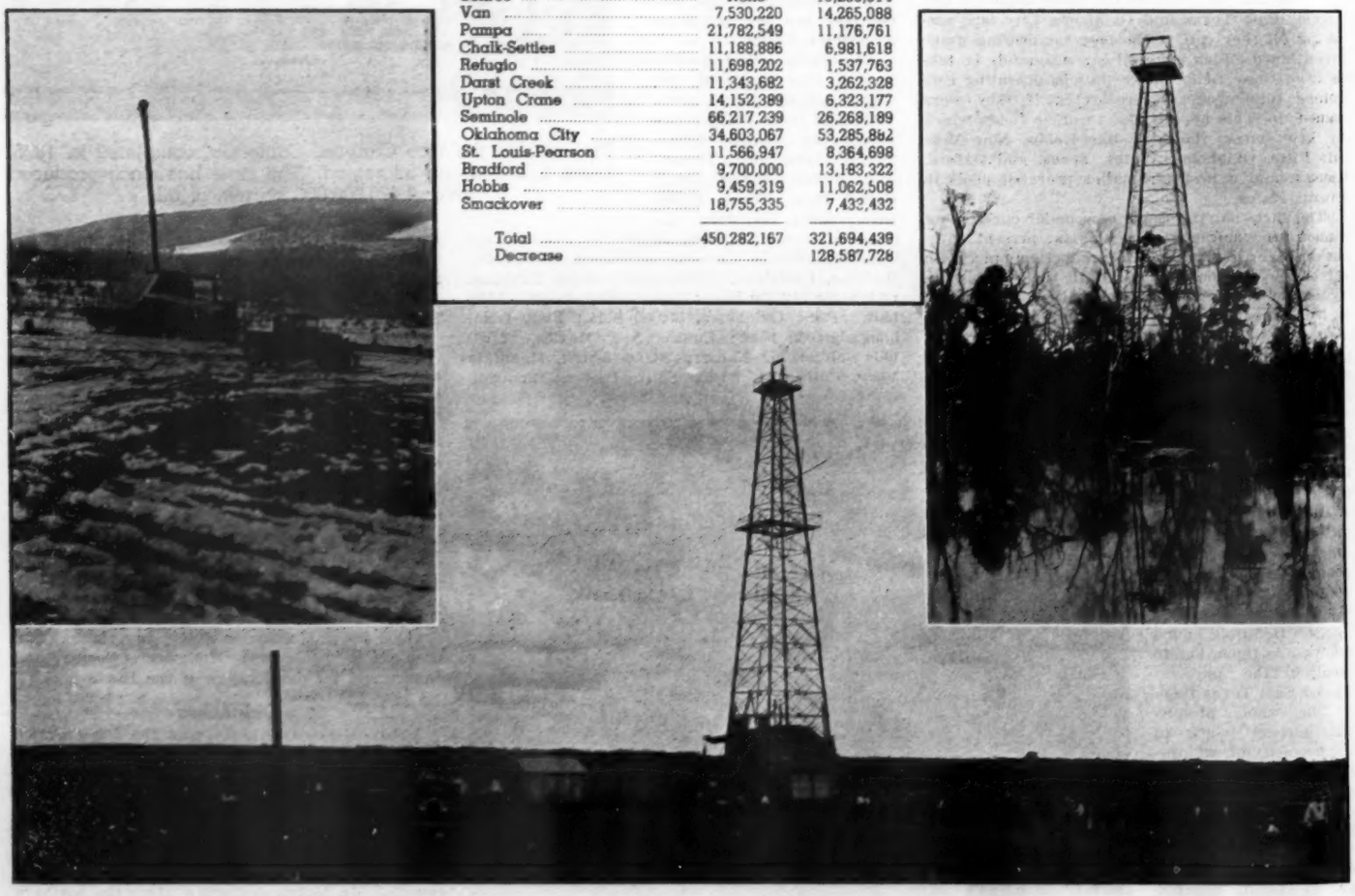
	1930 Bbls.	1935 Bbls.
Santa Fe Springs	44,251,396	16,158,795
Kettleman Hills	6,209,357	27,606,817
Elwood	14,606,307	4,559,588
Midway Sunset	23,487,147	20,239,798
Huntington Beach	11,108,203	15,133,293
Ventura Avenue	17,493,155	10,979,450
Long Beach	36,599,688	26,562,848
Yates	42,603,498	15,873,383
Hendrick	25,925,581	6,066,681
Conroe	None	15,269,014
Van	7,530,220	14,265,088
Pampa	21,782,549	11,176,761
Chalk-Settles	11,188,886	6,981,618
Refugio	11,698,202	1,537,763
Darst Creek	11,343,682	3,262,328
Upton Crane	14,152,389	6,323,177
Seminole	66,217,239	26,268,189
Oklahoma City	34,603,067	53,285,862
St. Louis-Pearson	11,566,947	8,364,698
Bradford	9,700,000	13,183,322
Hobbs	9,459,319	11,062,508
Smackover	18,755,335	7,432,432
Total	450,282,167	321,694,439
Decrease		128,587,728

Colorado

All signs point to a major wildcat play in eastern Colorado during 1936. Estimates place the total acreage under lease in the state at 4,000,000 to 5,000,000, the preponderance of which lies to the east of the mountain range through the central part of the state, extending to the Kansas and Nebraska lines, and from New Mexico and Oklahoma on the south to Wyoming on the north. The area involved is approximately 250 miles long by 150 miles wide. It is probable that six or eight widely scattered tests will be drilled in this area in 1936 regardless of the outcome.

More than a dozen seismograph surveys were made in eastern Colorado last year, the heaviest leasing having taken place along the eastern boundary of the state extending from Baca County north to Yuma County. The Indian Territory Illuminating Oil Co. is well entrenched around Wray where it has been surveying and leasing for some time and has several blocks. Texas Co., the Continental Oil Co., the Gypsy Oil Co., and others have extensive holdings northward from Lamar in Prowers County, and Robb, Morgan & Gross have announced a test for the Edler district 10 miles southwest of Springfield, in Baca County. In Cheyenne and Kiowa Counties the companies al-

(Continued on Page 70)



Upper left: Test in New York state drilling for gas. Center, discovery well in the Lucien pool in Oklahoma. Upper right: Rigs are located on desert, plain and swamp and even out in the Gulf of Mexico, in Texas

Faulting Plays an Important Part in Southwest Texas Coastal Region

By W. ARMSTRONG PRICE

President, Texas Academy of Science and Consulting Geologist, Corpus Christi, Tex.

Although gas in large quantities was discovered at White Point, near Corpus Christi, Tex., in 1913 and produced from the Saxet field and sold in Corpus Christi in 1923, and oil was produced at Refugio in 1929, no active oil play developed in the South Texas Coastal district until 1930, when discovery of oil in a thick producing section in the marine Oligocene on a large dome-shaped structure at Sugarland, near Houston, Tex., led operators to expect similar good production from Oligocene sands on domes in Nueces County.

The idea prevailed that Refugio, White Point and Saxet were large dome-shaped structures and they should produce prolific amounts of oil at any point where this group of sands was penetrated.

The first deep well drilled through the Oligocene in the Saxet field, on a Donigan tract, punctured that boom. The well did not produce. The marine Oligocene section was found to be about half as thick as at Sugarland. Prospecting, however, developed the excellent Greta pool, as well as oil production in Saxet, Fox, McFaddin-O'Connor, Tomocconner, and the "water white" oil at Agua Dulce and White Point.

The Greta field set operators looking for another type of structure, the faulted anticline, or the up-warp or nose closed up-dip by a prominent fault, and introduced the idea of faulting in the district for the first time outside of purely geological circles. This developed the Greta trend play which diminished when only one good well was gotten at Angelita, although this trend-play is still active.

In 1933 the writer published an article which pointed out a fault at the west side of the Saxet field. This fault later became better known through the drilling of wells along it. Other faults have since been found. The accidental discovery of oil on the Ocker tract while drilling for gas increased activity in the Saxet field.

Use of the electric well-hole survey in the summer of 1935 in a number of wells enabled geologists to work out the detailed subsurface structure of this field and brought about the present new conception of fault blocks as the type of structure likely to dominate oil development in the coastal belt of the Corpus Christi district. The recent bringing in of the Culton oil wells in the edge of Corpus Christi and of the Driscoll well at the south edge of Nueces County, gave a new impetus to the play.

The discovery that as many as three or four faults run northeast and southwest through the Saxet field, that they dip gently, at from 45 to 60 degrees instead of steeply, and that production occurs either on low up-warps along the faults or in down-dropped blocks between faults, known as grabens, entirely changed the idea which those who have studied the faults have of the dominant structure of this district from domes to fault trends. It cannot yet be said there are not dome-shaped uplifts present, but the expectation is that production may run out of most of the known districts along fault lines.

The use of electric hole surveys have shown the presence of faults in many other fields on the Gulf Coast. In some fields they are said to be abundant and complicated by cross faulting.

Several important consequences of the knowledge we have to do with faults and slightly tilted fault blocks instead of scattered domes may be mentioned. "Low wells" in which the markers are lower than expected when scattered wells several miles apart are taken as guides, now mean little until it is known whether they are high or low in their own fault block. Production may be, and has already been, found on both sides of some faults, with low and high areas alternating along the fault planes. While the faults seem to control the location of much of the production detailed information may be needed before this is evident.

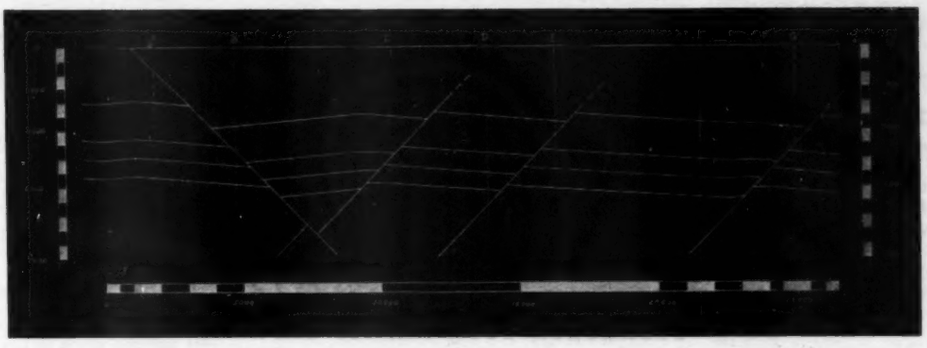


Diagram showing how wells might hit or miss production in faulted area

A well dry in one sand may, because the faults are not steep, find oil below a fault in other sands. Production on one fault block may be relatively close, up or down the dip, to production on adjacent fault blocks. Less territory than formerly can now be condemned until thoroughly prospected.

A most important consideration, more firmly established since the faulting has been definitely determined is that since the faults show vertical movements of from 20 to 350 feet, sands may be "lost" or passed through unless close control is had of subsurface structure. Thus, faulting is responsible for many irregularities formerly assigned to lensing of sands.

The so-called "4,800-foot sand" of the Saxet field is in reality two or more distinct sands, actually separated by several hundred feet of strata containing other sands. As has been predicted by the writer as long ago as 1931, the Saxet district has 15 or more producing oil and gas sands. These sands are grouped as follows:

Goliad - Fleming group, shallow dry-gas sands.

Catahoula, oil and gas sands.

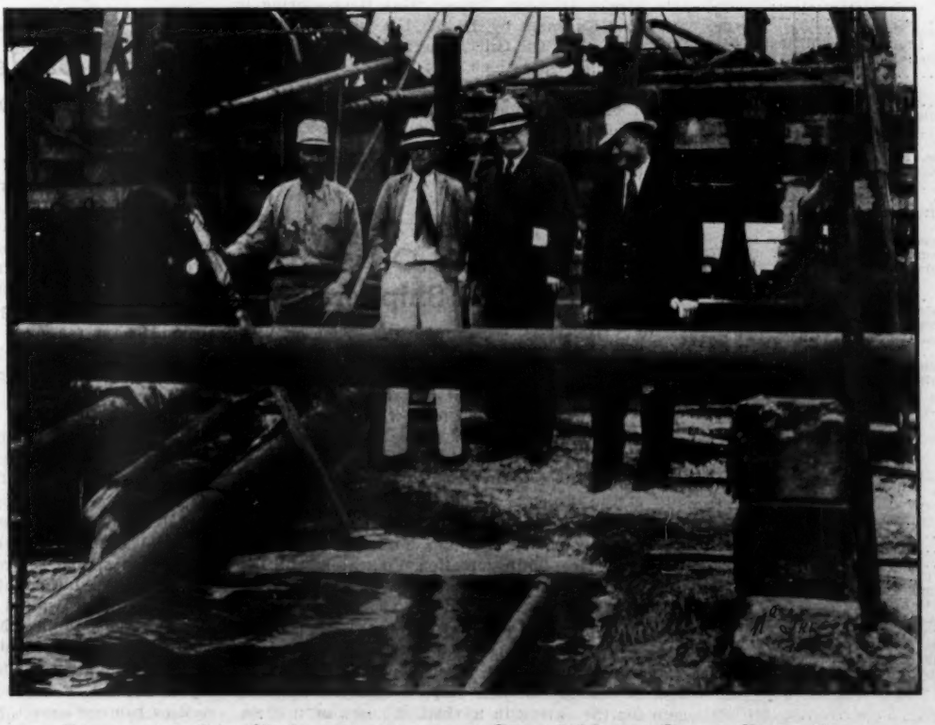
Discorbis Oligocene, oil and gas sands.

Heterostegina Oligocene, oil and gas sands.

Frio Oligocene, water white oil, and gas.

As these considerations become generally adopted, geophysical and subsurface prospects formerly held condemned by a few test wells will be tested again.

Figure 1 shows contrasting structural posi-



Discovery well in Clarkwood extension to Saxet field near Corpus Christi, Texas

tions, and varying expectations of production, in wells drilled in a field faulted in the manner described in this article. Well A, drilled through a fault, finds all sands high, well B, drilled through the same fault, finds all sands low. Well C, finding all sands high, might not be suspected of cutting a small fault. Wells D and E, cutting the same fault, would find the deeper sands at different depths below the first marker-bed, deep sands in E probably obtaining production, while those in D, a half mile down-dip, might get only salt water. Well F, beginning as an east flank well on a small high, becomes a high, top-of-structure well after passing through the fault. Well G, through the same fault, might be dry in all sands. Further variations would result from alternation of highs and lows along the fault planes, from curving of fault planes from marked and variations in throw along them. The four marker beds shown correspond in depths to the 2,400-foot gas sand, base of Oakville, Discorbis top, and Heterostegina top in the Saxet district, respectively from top to bottom.

The drawing is to the same vertical and horizontal scales, distances being shown in feet. Faults at 45 degrees.

Osage Sale Brings $376,200.00; With Top Price $84,000

At the sale of Osage oil leases February 11, at Pawhuska, Okla., 13,287.25 acres were leased, and the total premium paid was $376,200. Following are the tracts, purchasers and prices:

SE 8-29-12, E. A. Meyer, Pawhuska	$200
NE 32-23-12, Link Oil Co.	200
NE 33-23-12, Link Oil Co.	200
5 and 6—passed—no sale.	
NW 28-20-11, Sand Springs Home	200
SW 28-20-11, Sand Springs Home	200
NE 29-20-11, Sand Springs Home	200
SE 29-20-11, Sand Springs Home	200
NW 4-23-11, Opal Twyman	200
NW 28-23-11, Opal Twyman	200
NE 1-24-11, D. F. Milliard	200
SW 35-25-11, J. H. Alexander	200
16—passed—no sale.	
NE 23-27-11, Phillips Petroleum Co.	200
NW 23-27-11, Phillips Petroleum Co.	200
19—passed—no sale.	
SW 23-27-11, Phillips Petroleum Co.	200
SW 13-21-10, J. R. Higgins	200
NW 30-23-10, J. H. Chevalier	200
24—passed—no sale.	
SW 6-21-9, I. D. Simons-Stoner Brothers	250
NW 17-21-9, Murray Ringold	200
SE 18-21-9, Johnson Oil & Refining Co.	300
NW 27-21-9, C. P. Gray-R. S. Tolson	2,000
SW 28-21-9, Phillips Petroleum Co.	900
*Fr. NE 31-21-9, Johnson Oil & Refining Co.	700
NE 32-21-9, Phillips Petroleum Co.	3,100
NW 33-21-9, Phillips Petroleum Co.	1,600
SE 31-22-9, Johnson Oil & Refining Co.	650
SW 31-22-9, Paul McIntyre	900
NE 25-22-9, J. H. Chevalier	850
SE 33-22-9, M. & F. Oil Co.	200
NE 8-24-9, Bowers Investment Co.	1,300
NW 8-24-9, Indian Territory Illuminating Oil Co.	1,300
SE 1-21-8, Johnson Oil & Refining Co.	450
NE 14-22-8, L. B. Jackson	200
NE 5-24-8, H. F. Worley	300
SE 5-24-8, H. F. Worley	350
NW 17-24-8, Peters Petroleum Corp.	400
NE 18-24-8, Clyde S. Miller	200
SW 18-24-8, Carolena Oil Co.	350
NW 23-24-8, Carolena Oil Co.	2,300
NE 24-24-8, Carolena Oil Co.	850
NW 27-24-8, M. J. Graham	800
SE 27-24-8, Carolena Oil Co.	900
SW 27-24-8, Johnson Oil & Refining Co.	800
NW 6-22-7, Devonian Oil Co.	550
NE 26-22-7, Bay Oil Co., Houston	1,400
SE 26-22-7, Bay Oil Co., Houston	2,300
SW 31-23-7, Champlin Refining Co.	2,500
NE 7-24-7, H. F. Worley	350
SE 7-24-7, H. F. Worley	300
NE 9-24-7, Tide Water Oil Co.	$4,000
NW 9-24-7, Phillips Petroleum Co.	35,000
NW 10-24-7, Lewis, Texas Co., Continental Oil Co.	51,000
NE 14-24-7, Texas Co.	3,100
SE 14-24-7, Bowers Investment Co.	6,100
NW 17-24-7, Champlin Refining Co.	1,800
SW 17-24-7, Texas Co.-Lewis	1,100
NW 25-24-7, F. L. Sarkey	200
SE 31-24-7, Peters Petroleum Co.	200
NE 36-25-7, Texas Co.	2,300
SW 1-26-7, C. H. Westfall	200
SE 2-26-7, C. H. Westfall	200
NE 1-22-6, Phillips Petroleum Co.	2,000
NW 13-23-6, Bowers Investment Co.	700
SW 13-23-6, Bowers Investment Co.	800
SE 36-23-6, Bowers Investment Co.	1,700
NW 16-25-6, Carter Oil Co.	41,000
NE 29-25-6, Texas Co.	8,300
NW 29-25-6, Carter Oil Co.	4,000
NW 13-26-6, Continental Oil Co.	500
SW 13-26-6, Phillips Petroleum Co.	750
SE 23-26-6, Kewanee Oil & Gas Co.	25,000
NE 26-26-6, Kewanee Oil & Gas Co.	61,000
NW 33-27-5, J. H. Chevalier	300
SW 33-27-5, J. H. Chevalier	200
NW 3-25-3, Phillips Petroleum Co.	1,800
SE 3-25-3, Phillips Petroleum Co.	6,200
SW 3-25-3, H. F. Worley	3,100
Total premium paid	$376,200

*7.25 acres.

Deep Pay in Healdton Field Uncovered by Sinclair Test

A deep pay horizon in the old Healdton field of western Carter County, Oklahoma, was uncovered late Monday by Sinclair Prairie Oil Co. with No. 22 Thomas, NW SW SE section 5-4s-3w. At total depth of 3,006 feet in a lime in the Simpson formation, it had a hole full of oil and was shut in for tankage and connections.

This is the first Ordovician production found in the Healdton field, which has been a prolific producer from shallow Pennsylvanian horizons, at 800 to 1,450 feet.

No. 22 Thomas originally was drilled to the regular Healdton series, but ran too high structurally to find commercial production in that zone. Drilling was stopped at 1,700 feet, but operators determined several months ago that formations were running sufficiently high to justify a deep test. Deepening was begun recently, and it had the first showing of oil at 2,996 feet and the oil increased as it drilled on to 3,006 feet in the lower McLish formation of the Simpson group.

This is the second deep, significant strike to be made in Carter County, south of the Arbuckle Mountains, the first being Carter Oil Co. and others No. 1 Williams, SW NE SW section 27-2s-3w, in the old Fox field, about 10 miles north. At total depth of 8,088 feet in Simpson formation, it flowed an estimated 10,000 bbls. of oil a day, but stuck pipe and a difficult fishing job resulted in a lost hole, and it now is drilling ahead again in new hole at about 7,303 feet.

The No. 1 Williams strike was hailed as the most important discovery in Oklahoma in 1935, and now the strike at Healdton intensifies interest in the deep pay possibilities of southern Oklahoma. The deep pay in the Sinclair Prairie well is 30 to 40 feet higher structurally than in the Carter well at Fox, indicating a tremendous drop between the two areas.

Southeast of the Hewitt field in Carter County, Texas Co. and J. H. Hudson No. 1 Cathey, SE NE NE section 6-5s-1w, wildcat, showed for 25 bbls. of oil a day at 4,164 feet, total depth, was shot and was cleaning out.

Carter Oil Co. has staked location for a deep wildcat at No. 1 Voorhees, C SE SW section 34-5s-2w, near the Love County line but in Carter County. It is on a block of about 7,000 acres and about 1 mile from a dry hole drilled by W. F. Turner a year ago.

Production Program for A.P.I. Meeting at Wichita, Kans.

The Mid-Continent spring meeting of the production division of the American Petroleum Institute will be held in Wichita, Kans., on February 20 and 21, at the Allis Hotel, and members from Kansas, Oklahoma, Texas, Arkansas and Louisiana are expected.

The technical program will consist of about eight papers, part of them being: "Trends of Surface Pumping Equipment in Mid-Continent Fields," by J. S. Montgomery, Phillips Petroleum Co., Bartlesville, Okla.; "Dynamometer Tests Indicate Present Pumping Methods Subject Sucker Rods to Unnecessary Loads," by J. F. Eaton, Jarecki Manufacturing Co., Tulsa, and H. D. Collins, Gulf Oil Co., Gypsy Division, Tulsa; "Gas Repressuring in Eastern Kansas," by H. M. Hutchinson, Empire Oil & Gas Co., Oil Hill, Kans.; "Power Equipment for Drilling Operations," by W. C. Dryer, Westinghouse Electric & Manufacturing Co., Dallas, Tex.; "Present Producing Methods in Oklahoma City Field," by Fred Lichtenheld, Indian Territory Illuminating Oil Co., Oklahoma City, Okla.; and "Salt Water Disposal," by R. C. Mitchell, Kansas State Board of Health.

Florida Canal Is Opposed by Major Oil Shippers

WASHINGTON, D. C., Feb. 10.—Senator Vandenberg has placed before the senate commerce committee several letters from steamship operators saying they would not use the proposed Florida ship canal even if no tolls were charged. The commerce committee has under consideration a resolution by Mr. Vandenberg to appoint a special senate committee to investigate the economic necessity of the project.

The companies he quoted included Socony Vacuum Co., Standard Vacuum Transportation Co., Cities Service Transportation Co., Standard Oil Co. (New Jersey), Texas Co., Sun Oil Co., Gulf Refining Co. and Richfield Oil Co. of California.

The letters asserted that the added trouble and expense of employing local pilots to take their vessels through the proposed canal, added to the risk of damage to their ships, would not compensate for the saving in navigation costs, even if no tolls were charged. They all agreed that the estimated cost of between $140,000,000 and $200,000,000 was too much to pay for the expected benefits.

Senator Fletcher, however, read statements of marine engineers estimating substantial savings in navigation costs which would pay for the canal's construction and upkeep. He said a careful investigation had been made for two years and the new inquiry would be a waste of time and money.

He quoted Major Gen. Edward M. Markham, chief of engineers, that further investigation is not needed and that the plans proposed are feasible. The army engineers have already expended $5,000,000 allotted from WPA funds to clear the route of the proposed waterway.

Secretary Ickes, public works administrator, told the committee his office had twice declined to undertake the canal because it would not be self-liquidating.

Another Crude Oil Price Raise Foreseen by Mr. Rieber

DALLAS, Tex., Feb. 10.—General conditions in the oil industry are the best for six or seven years, T. Rieber, chairman of the board of the Texas Corporation and associated companies, says. Mr Rieber, accompanied by W. S. S. Rodgers, president, and a number of other leading Texas officials, are on an inspection trip which will carry them to California.

"The petroleum industry is in the best all-around shape for some time—five or six or seven years," Mr. Rieber declared. "The only thing we have to watch out for is too much of a price raise prematurely. We want the producer to get a fair price, but there is so much potential production that a too high advance in crude prices might start all over again the misery which we just recently escaped from.

"If we can get through the current season of low demand, I anticipate another crude price advance. When? Well, I don't know. The last one slipped up on me before I knew it, and the next one may, too. I thought the last was a mistake; I'd rather have waited a few months. Seriously, though, I look for another raise a little later, perhaps about the same size as the one just made.

"I'm delighted at the progress the oil industry is making. Everybody is working together as well as you can expect, and the industry is in fine shape."

Substantial Gains in Domestic Demand Are Shown in New All Time Record

By C. O. WILLSON

The demand for all oils in United States in 1935 exceeded that of any previous year. This record year materialized despite the fact that the export demand for several products is still far behind the yearly totals of the late twenties and is due to the substantial gains in the domestic consumption of petroleum products over the past two years.

The foregoing facts were derived from the Bureau of Mines report released during the past week covering December petroleum operations with preliminary figures for all of 1935. While 1935 operations have been history for several weeks, the record of the past year merits study not so much as explaining the favorable developments of the past year as indicating the probable trends during 1936 and the years to follow.

The 1935 operations in relation to 1934 are summarized in the accompanying table with the smaller table giving a comparison of the 1935 demand with the peak periods of previous years. In regard to second table the government bureau finds it necessary from time to time to make minor changes in the classification of products. These changes modify the accuracy of comparisons when 1935 totals are compared to data of several years ago. These variations are not of sufficient importance to nullify the significance of the indicated general trends which is the purpose of the second table.

1935 DEMAND FOR PETROLEUM PRODUCTS IN UNITED STATES COMPARED TO PEAKS OF PREVIOUS YEARS

(Data in 42-gallon barrels)

Products—	Peak year	Total for peak year	1935 pct. of peak year
Total all oils	1929	1,103,203,000	100.6
Crude to stills	1929	987,708,000	97.8
Motor Fuels (Gasoline)			
Total demand	1930	460,375,000	100.5
Domestic demand	1934	407,106,000	106.2
Export demand	1930	65,575,000	46.3
Kerosene			
Total demand	1925	61,181,000	88.7
Domestic demand	1934	44,234,000	107.7
Export demand	1919	23,536,000	28.2
Fuel Oil and Gas Oil			
Total demand	1929	448,263,000	85.0
Domestic demand	1929	409,112,000	86.2
Export demand	1927	47,391,000	60.1
Lubricating Oils			
Total demand	1929	34,469,000	81.4
Domestic demand	1929	23,609,000	87.2
Export demand	1928	11,023,000	76.9

Total demand equals domestic demand plus exports for the peak year.

As was apparent in earlier reports, 1935 was a year of large increases in supply and demand for petroleum and its products in United States. Domestic crude oil production was less than 15,000,000 bbls. under the peak year of 1929 and as shown in table crude runs to stills were almost 98 per cent of the peak year, indicating a recovery from the depression period which has not been duplicated by any other major industry.

To many economists, the large increase in demand overshadows in importance, developments in the supply end which marked the end of the uncontrolled period of overproduction with another substantial withdrawal from the inventories accumulated in previous years. In this connection stocks of all oils are now approximately 160,000,000 bbls. under the peak inventory period of 1929.

On the demand side the total outlets for motor fuels in this country in 1935 exceeded the previous peak year of 1930 by one-half of 1 per cent. The export demand was only 46.3 per cent of the 1930 peak but the 6.2 per cent gain in domestic demand more than made up for this loss so that refiners enjoyed their best year for their most important product.

The domestic demand for kerosene also continued to expand with a gain of 7.7 per cent over

Crude Oil and Refinery Situation Summarized—1935-1934

Supply and Demand—Crude Oil (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude Dec. 31
1935	1,026,181,000	1,048,804,000	22,623,000	2.2	993,942,000	32,239,000	934,291,000	114,513,000	314,631,000
1934	943,623,000	960,843,000	17,220,000	1.8	908,065,000	35,558,000	854,116,000	106,727,000	337,254,000
Increase, 1935	82,558,000	87,961,000	.....	.....	85,877,000	†3,319,000	80,175,000	7,786,000	†22,623,000
Increase, 1935	8.7%	9.1%	.....	.....	9.4%	†9.3%	9.4%	7.3%	†6.7%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks Dec. 31§
1935	465,534,000	462,936,000	*2,598,000	*.5	465,514,000	20,000	432,556,000	30,380,000	54,345,000
1934	423,802,000	431,792,000	7,990,000	1.9	423,801,000	1,000	407,106,000	24,686,000	51,945,000
Increase, 1935	41,732,000	31,144,000	.....	.....	41,713,000	19,000	25,450,000	5,694,000	2,400,000
Increase, 1935	9.8%	7.2%	.....	.....	9.8%	.....	6.2%	23%	4.6%
Kerosene									
1935	55,813,000	54,296,000	*1,517,000	*2.8	55,813,000	.....	47,652,000	6,644,000	7,915,000
1934	53,855,000	54,013,000	160,000	.3	53,855,000	.....	44,234,000	9,781,000	6,398,000
Increase, 1935	1,958,000	281,000	.....	.....	1,958,000	.....	3,418,000	†3,137,000	1,517,000
Increase, 1935	3.6%	.5%	.....	.....	3.6%	.....	7.7%	32.1%	23.7%
Gas Oil and Fuel Oil									
1935	360,914,000	381,201,000	20,287,000	5.6	341,251,000	19,663,000	352,712,000	28,489,000	103,984,000
1934	339,605,000	360,594,000	20,989,000	6.2	326,971,000	12,634,000	331,989,000	28,605,000	110,397,000
Increase, 1935	21,309,000	30,607,000	.....	.....	14,280,000	7,029,000	20,723,000	†116,000	†6,413,000
Increase, 1935	6.2%	8.7%	.....	.....	4.4%	55.6%	6.2%	†4.0%	†5.8%
Lubricating Oil									
1935	27,772,000	28,078,000	306,000	1.1	27,771,000	1,000	19,598,000	8,480,000	7,025,000
1934	26,375,000	26,144,000	*231,000	*.8	26,373,000	2,000	18,484,000	7,660,000	7,331,000
Increase, 1935	1,397,000	1,934,000	.....	.....	1,398,000	†1,000	1,114,000	820,000	†306,000
Increase, 1935	5.2%	7.4%	.....	.....	5.2%	.....	6%	10.7%	†4.2%
Petroleum Wax (Lbs.)									
1935	469,906,000	491,367,000	21,461,000	4.5	450,240,000	19,666,000	260,434,000	230,933,000	114,675,000
1934	506,612,000	438,993,000	*67,019,000	*13.2	468,720,000	37,292,000	240,035,000	198,958,000	136,136,000
Increase, 1935	†36,106,000	52,374,000	.....	.....	†18,480,000	†17,626,000	20,399,000	31,975,000	†21,461,000
Increase, 1935	†7.1%	11.9%	.....	.....	†4.1%	†47.2%	8.5%	16.0%	†15.7%

*Excess supply. †Decrease. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments. ‡Crude oil only. §Includes finished, unfinished refinery gasoline and natural gasoline.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

	Total imports§	Total exports§	Total crude to stills	Nat. gasoline production	Total supply all oils*	Total demand all oils*	Stocks all oils Dec. 31
1935	52,676,000	128,152,000	966,243,000	38,858,000	1,087,353,000	1,109,801,000	541,700,000
1934	50,494,000	114,507,000	895,636,000	36,556,000	996,823,000	1,034,671,000	564,350,000
Increase, 1935	2,182,000	13,645,000	70,607,000	2,302,000	90,530,000	75,130,000	†22,650,000
Increase, 1935	4.3%	11.9%	7.8%	6.3%	9.0%	7.2%	†.4%

*Total all oils includes crude refined products, natural gasoline and benzol. †Decrease. §Includes crude oil and refinery products. In case of gas oil and fuel oil and wax, imports include only products for domestic use. All data based on Bureau of Mines reports.

1934 which in turn was 8.3 per cent greater than the previous record year of 1925. While the "kerosene age" in the oil business ended many years ago the fact remains that the actual consumption of the product in this and many other countries is now several times greater than it was during that period.

The 32 per cent decline in kerosene exports in 1935 was an unexpected development which explains the relatively weak market structure of that product in this country over the past eight months. A few years ago refiners were accustomed to look to foreign markets as outlets for approximately one-third of their kerosene output. This demand has declined steadily and with the large decrease in 1935, the year's exports were only 28 per cent of the peak and less than 15 per cent of the total demand. The decline in exports does not reflect an actual shrinkage in kerosene consumption in foreign countries but is due to the increased output of refineries located outside this country. The decline in exports over the past year backed up more kerosene on the domestic market and supplies have been more than adequate in several important refining centers resulting in an unsatisfactory price situation. Developments in this product over the past year show the close interdependence of foreign and domestic markets and the necessity of gauging trends in both outlets in predicting probable price changes in this country.

In regard to foreign outlets for crude oil and its products in this country there are several angles which merit watching. The large decline in the export demand for finished products in this country is partially a reflection of the tariff policy which became effective in the summer of 1932. The imposition of a 21-cent per barrel duty on crude oil and residual fuels with higher rates on some of the other refinery products brought major rearrangements in both domestic and foreign refinery operations of certain major oil companies. In effect imports were greatly decreased and at the same time foreign outlets which formerly were supplied in this country in the form of exports were shifted to plants outside this country. At this time a substantial part of the remaining imports into this country consists in crude brought into this country under bond for refining and later re-exportation into foreign markets. Since 1932 the nationalistic policies of certain countries has also tended to foster the expansion of foreign refining facilities. Finally improvements in processing methods are enabling foreign operators to secure kerosene, lubricating oils and other products from their crudes, not previously obtainable. While the export demand for most refinery products showed an increase in 1935 over 1934 there is nothing to indicate at this time that the industry in this country will recover in full the markets of the late twenties and early thirties.

This situation in regard to foreign markets is reflected directly in the case of fuel oil and gas oil. The domestic demand and total demand for these products are about 85 per cent of the peak. Previous to 1932 large quantities of low gravity crude and fuel oil were imported into this country. The crude refined at domestic refineries gave large yields of heavy fuel. This fuel and that which was imported were used to bunker ships at American ports and they were an important factor in the total domestic demand for fuels at that time. Now a large part of this bunkering market goes directly to refiners with plants located abroad.

The domestic demand for lubricating oils in 1935 was 87.2 per cent of the peak. In the case of this product two factors are tending to postpone a return to the peak demand. In the first place while motorists in this country are using more motor fuel than ever before their motor oil demands are less. The explanation lies in the improved oils which have enabled car owners to economize in the use of lubricants. It is also true that the industrial demands for lubricants have not equaled the peak years. In this market also consumers are economizing in the use of lubricants.

Exports of lubricants increased in 1935 but the foreign demand was only 77 per cent of the peak year of 1928. Domestic refiners of lubricants over the past few years have had more and more competition from foreign refiners and construction projects to be completed in 1936 indicate that this trend is to continue.

Oil Marketers Formulate Code to Govern Trade Practices

CHICAGO, Feb. 8.—Following four days this week of free and frank discussion among 250 men representing a cross-section of the various interests involved in the marketing division of the oil industry, a preliminary draft of a voluntary code of fair practice has been agreed upon. It is expected this code, after such emendation as may be required and with the approval of the Federal Trade Commission, will become the accepted body of rules governing the marketing of petroleum products in the middle western territory. As a matter of fact, however, if the code once gets into successful operation in the area for which it initially is designed, it is believed probable its provisions will be adopted throughout the entire territory between the Rocky and the Appalachian Mountains and from Canada to the Gulf.

The code in its present form was made from recommendations of six subcommittees, approved with virtual unanimity by the conference and then placed in the hands of a specially chosen code committee, of which Russell Williams, of Gasteria, Inc., Indianapolis, Ind., is chairman. The meetings, held in the Palmer House, began Tuesday and ended Friday. Refiners, jobbers, dealers (including trackside) and brokers took part.

The conference was held at the suggestion of a group of 12 Mid-Continent refiners. P. J. Schroeder, of the Petroleum Service Co., Minneapolis, Minn., was chosen chairman, and W. R. Schuh, president of the National Association of Petroleum Retailers, secretary. Opening the meeting, I. A. O'Shaughnessy, president of the Globe Oil & Refining Co., Blackwell, Okla., said:

"The market cylinder of the petroleum industry engine has been 'missing' for some time and we are confronted with the necessity effecting and maintaining a balance in all branches. We must realize that an equitable relation between crude values and the prices of derivative products must be maintained. A noncontroversial, universally acceptable code of ethical marketing practices, administered by regional and state committees with equitable representation of all divisions of the marketing branch, is the foundation stone on which to build an adequate and economic marketing structure."

The six subcommittees were assigned to recommend rules under the following heads: (1) Price posting (including special inducements, rebates, premiums, etc.). (2) Selling below cost. (3) Equipment. (4) Exclusive dealing contracts and breach of contract. (5) Administration. (6) Miscellaneous.

The rule recommended under the head of selling below cost reads: "The selling of goods below cost with the intent and with the effect of injuring a competitor, and where the effect may be to substantially lessen competition or tend to create a monopoly or unnecessarily to restrain trade is an unfair trade practice."

The tentative code, formulated by the code committee, from the recommendations of the subcommittees, is to be submitted to individuals, companies and trade organizations in the oil industry, and on February 27 the code committee will meet in Chicago to appraise the approvals, rejections, and criticisms received. It will make such revisions as seem necessary and then, if approval of the tentative code is virtually unanimous, will submit the final draft to the Federal Trade Commission.

It is planned to have the code administered through a regional committee, with the cooperation of state and metropolitan committees.

Report on Bureau of Mines on Petroleum and Products

Crude Petroleum: The production of crude petroleum in December, 1935, totaled 88,711,000 bbls., a daily average of 2,861,600 bbls. This average is about 21,000 bbls. below that of November, but 18 per cent above the average of December, 1934. The preliminary total for crude-oil production for 1935 is 993,942,000 bbls., an increase over 1934 of about 86,000,000 bbls., but slightly under the record (1,007,323,000 bbls.) of 1929.

Daily average production in Texas and California showed little change, but Oklahoma showed a decline of about 15,000 bbls. California's average of 678,300 bbls. was the highest since February, 1930. Louisiana continued to set new production records as the daily average output at Rodessa rose from about 10,500 bbls. in November to about 17,000 bbls. in December.

Stocks of crude oil continued to decline but at an increasingly slower rate. The withdrawal in December, 1935, was 927,000 bbls., that for the year was approximately 22,500,000 bbls.

Refined Products: The influence of an unusually heavy fuel-oil demand was felt in refinery yields and the average recovery of gasoline from crude declined from 44.2 per cent in November to 44 per cent in December.

The domestic demand for motor fuel in December was 33,734,000 bbls., or 10.3 per cent above the demand of a year ago. The domestic demand for the entire year, as indicated by the preliminary or monthly figures, was 432,556,000 bbls., a new record, and a gain of 6.3 per cent over 1934. Exports of motor fuel continued to run counter to the usual seasonal trend, the total for December being 3,243,000 bbls., or nearly double the total of a year ago. Stocks of finished and unfinished gasoline increased 4,647,000 bbls. in December and totaled 56,693,000 bbls. as the year closed.

The increase in fuel-oil deliveries, particularly in the eastern states, in December was outstanding, the domestic demand, exclusive of transfers in California, for that month being 38,351,000 bbls., which is 14 per cent higher than the domestic demand of December, 1934.

According to the Bureau of Labor Statistics, the price index for petroleum products for December, 1935, was 52.8, compared with 52.5 in November, 1935, and 49.8 in December, 1934.

The refinery data of this report were compiled from refineries having an aggregate recorded crude-oil capacity of 3,774,000 bbls. These refineries operated during December, 1935, at 73 per cent of their capacity, compared with an operating ratio of 73 per cent in November.

Texas Supreme Court Upholds Railroad Commission Rule

AUSTIN, Tex., Feb. 10.—The Supreme Court of Texas announced the application of L. B. Pruitt for a writ of error from a decision of the third court of civil appeals construing the old law prohibiting issuance of an injunction to restrain subsurface drilling for minerals was dismissed.

Pruitt obtained a permit from the Railroad Commission to drill a well on a strip of land in Van Zandt County, 80 by 2,640 feet, and Humble Oil & Refining Co., interested in adjoining property, sought a district court injunction to restrain him. The district court refused the writ and the court of civil appeals reversed and remanded.

The court of civil appeals, construing the old law, held it was intended to deal only with private property rights and was enacted before the state became interested in the conservation of oil on behalf of the general public. The court decided it could not be a limitation on the enforcement of the general conservation statutes.

The appellate court held the permit violated both the conservation laws and the rules governing exceptions to spacing.

Refiners In Mid-Continent Increasing Crude Run Schedules in February

By D. H. STORMONT

During February crude runs to refineries in the Mid-Continent will be increased by 14,060 bbls. to a total of 515,660 bbls. daily, according to estimates made by refiners in that area at the first of the month. East Texas was the only district in the Mid-Continent to show a decrease from its January schedule, although North Central and Southwest Texas increased their runs by only a small amount, 490 bbls. and 450 bbls., respectively. North Louisiana with an increase of 7,900 bbls. recorded the greatest increase, and Texas Panhandle was next with an increase of 3,540 bbls.

As the present estimate stands, the Mid-Continent refining area is operating at a rate substantially greater than a year ago, the total at that time being 66,850 bbls. less or 515,660 bbls. daily. Increased schedules in Oklahoma, Kansas, Southwest and West Texas account for the increased rate, with Kansas alone accounting for 27,000 bbls. of the increase. East Texas crude runs during this month are estimated to be 14,000 bbls. less than those of a year ago, 49 of the 81 plants operating in this district being closed down on the first of the month.

The high refining schedules which have been maintained during the fall and winter months is being reflected by the rapid increase in stocks of finished and unfinished gasoline held by refiners in the Mid-Continent. These stocks have increased over 2,200,000 bbls. since the low in October and have increased over 1,000,000 bbls. in January alone, the severe cold weather which has covered the United States for the past few weeks serving to greatly reduce motor fuel consumption. Although motor fuel stocks held by refiners are large and burdensome, the greater part of the stocks are held by the larger integrated companies, so that the gasoline market is said to be comparatively strong despite the fact that there is but little gasoline movement.

East Texas

East Texas refineries are continuing to reduce the total amount of crude being run and schedules in that area are now lower than at any time during the fall and winter. Several plants in that district are resuming operation this month, but this increase is more than offset by the number of those closing down. The Utah Refining Co. of Kilgore is now operating its 3,000-bbl. plant at a rate of 1,300 bbls. daily. Plants reported as being closed down on the first of the month were those of the Dominant Refining Co., East Texas Cracking Co., Heath Refining Co., Panama Refining Co., Rusk Refining Co., and Witeners Refining Co. The Lone Star Refining Co. is now operating in the name of the holding company, the Trinity Refining Co.

Runs to stills in the Texas Panhandle are being increased 3,540 bbls. daily during February. Refineries reporting increased runs in this district were Cosden Oil Co., Phillips, Shamrock Oil & Gas Corp. and the Standard Oil Co. of Texas. The Sunray refinery of the Shamrock, although not operating at the first of the month due to recent fire damage, was expected to be operating as soon as repairs were made.

Refinery Construction

One important refinery construction job expected to be completed in February is the 1,000-bbl. cracking unit at the Midway Refining Co.'s plant in Pettus, Tex. The construction comprises a new furnace, flash chamber and pressure distillate tower, the unit to operate on crude from the Pettus field. S. J. Moore is the sole owner of the plant, having recently purchased it from the Bee Oil & Refining Co. Moutray Oil Co. is building a new tower, furnace, boiler plant and additional storage at its Hawley refinery, and when the construction is completed the plant will have been increased to a daily crude capacty of 1,000 bbls. daily.

The recent rise in crude prices and the resulting advance in refinery gasoline prices point to 1936 as another year of modernization of refinery equipment. For five years cracking plants have been replaced at a slower rate than they have been needed, and competition in the manufacture of suitable motor fuels make the changes necessary now, and the generally improved economic condition makes this possible financially. Many of the plants in the Mid-Continent which have been closed down for several years will probably be dismantled or will be rebuilt into units of smaller crude capacity and cracking equipment included to enable the production of higher grade gasolines.

Mid-Continent Crude Runs

Average Daily (Barrels)

(Advance estimate compiled by The Oil and Gas Journal)

	1934	1935	1936
January	448,360	426,070	*501,600
February	456,619	448,810	515,660
March	465,680	451,510	.....
April	458,220	467,765	.....
May	457,165	466,015	.....
June	459,908	485,015	.....
July	477,012	494,210	.....
August	501,750	508,960	.....
September	499,830	541,080	.....
October	500,755	523,620	.....
November	500,445	524,475	.....
December	440,735	511,025	.....

* Corrected

Operations by Refinery Districts.

Daily crude runs

	Feb.	Jan.	Incr.
Arkansas	21,500	20,000	1,500
East Texas	57,190	61,110	*3,920
Kansas	119,590	117,590	2,000
N. Central Texas	40,650	40,160	490
North Louisiana	36,400	28,500	7,900
Oklahoma	153,030	150,930	2,100
Southwest Texas	27,800	27,350	450
W. Tex.-Panhandle	59,500	55,960	3,540
Total	515,660	501,600	14,060

*Decrease.

Estimated Daily Average Mid-Continent Refinery Crude Runs

ARKANSAS

Company and location—	Daily capacity	Av. daily runs Feb.	Av. daily runs Jan.
Berry Asphalt Co., Waterloo	2,000	800	800
Henry H. Cross Co., Smackover	4,000	4,000	4,000
Lion Oil Ref. Co., El Dorado	15,000	9,500	8,000
Macmillan Pet. Products Co., Norphlet	2,500	2,000	2,000
Ouachita Valley Ref. Co., El Dorado	2,500	(*)	(*)
Root Pet. Co., El Dorado	12,000	5,000	5,000
Simms Co., Smackover	3,000	(*)	(*)
Stephens Ref. Co., Stephens	750	200	200
Total	43,750	21,500	20,000

*Shut down.

KANSAS

Company and location—	Daily capacity	Av. daily runs Feb.	Av. daily runs Jan.
Barnsdall Oil Co., Wichita	4,000	3,500	3,500
Cusco Oil & Ref. Co., Chase	3,100	(*)	(*)
Derby Oil Co., Wichita	8,000	4,500	4,500
Dickey Ref. Co., McPherson	2,500	1,700	1,700
Eldorado Ref. Co., Eldorado	5,000	3,500	3,500
Falcon Ref. Co., Inc., Great Bend	800	500	500
Globe Oil & Ref. Co., McPherson	12,000	7,000	7,000
Kanotex Ref. Co., Arkansas City	12,000	8,000	5,000
Kansas Gasoline Co., Winfield	500	40	40
Kreuger Ref. Co., Laton	150	50	50
National Ref. Co., Coffeyville	8,000	6,000	6,000
Pet. Products Co., Chanute	1,000	800	900
Phillips Pet. Co., Kansas City	18,000	12,900	12,900
Russell Ref. Co., Russell	2,500	800	800
Shell Petroleum Corp., Arkansas City	20,000	16,000	17,000
Sinclair Ref. Co., Coffeyville	20,000	9,000	9,000
Sinclair Ref. Co., Argentine	11,000	7,000	7,000
Skelly Oil Co., Eldorado	23,000	16,000	16,000
Socony-Vacuum Oil Co., Inc., Augusta	16,000	15,000	15,000
Standard Oil Co. (Indiana), Neodesha	20,000	4,500	4,500
Vickers Pet. Co., Potwin	3,500	2,400	2,300
Western Ref. Co., Chase	1,000	400	400
Total	184,050	119,590	118,190

*Shut down.

OKLAHOMA

Company and location—	Daily capacity	Av. daily runs Feb.	Av. daily runs Jan.
Anderson-Prichard Oil Corp., Cyril	6,000	4,500	4,500
Associated Pet. Corp., Allen	8,000	(*)	(*)
Barnsdall Oil Co., Barnsdall	6,000	3,500	3,500
Barnsdall Oil Co., Okmulgee	10,000	(*)	(*)
Bell Oil & Gas Co., Grandfield	4,500	3,000	3,100
Black Gold Ref. Co., Oklahoma City	3,000	1,500	1,400
Century Pet. Corp., Oklahoma City	2,500	(*)	(*)
Champlin Ref. Co., Enid	16,000	6,500	6,500
Continental Oil Co., Ponca City	30,000	23,500	23,000
Crescent Ref. Co., Holdenville	1,000	(*)	(*)
Cushing Ref. & Gasoline Co., Blackwell	1,700	1,500	1,500
Cushing Ref. & Gasoline Co., Cushing	6,200	4,200	4,300
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,700	3,300
Empire Oil & Ref. Co., Okmulgee	4,000	2,330	2,190
Empire Oil & Ref. Co., Ponca City	12,000	7,410	6,940
Globe Oil & Ref. Co., Blackwell	8,000	3,000	3,000
Government Ref. Co., No. 1, Oklahoma City	1,000	(*)	(*)
Government Ref. Co., No. 2, Oklahoma City	3,500	(*)	(*)
Government Ref. Co., No. 3, Seminole	800	(*)	(*)
Hanger Ref. Co., Oklahoma City	1,000	(*)	(*)
Johnson Oil Ref. Co., Cleveland	6,000	4,000	4,000
Major Pet. Products, Oklahoma City	2,000	400	400
Marathon Oil Co., Bristow	5,000	2,600	2,580
Mid-Continent Pet. Corp., West Tulsa	40,000	15,000	18,000
Monarch Ref. Co., Oklahoma City	2,000	900	1,000
Omar Ref. Co., Garber	8,000	2,500	2,500
Paramount Ref. Co., Oklahoma City	2,000	700	700
Peppers Gasoline Co., Oklahoma City	500	200	200
Phillips Pet. Co., Okmulgee	6,000	4,600	4,530
Pure Oil Co., Muskogee	10,000	8,500	8,000
Rock Island Ref. Co., Beckett	6,000	3,000	3,000
Sinclair Ref. Co., Sand Springs	8,000	3,200	3,200
Sinclair Ref. Co., West Tulsa	6,000	(*)	(*)
Sooner State Ref. Co., Oklahoma City	700	400	400
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co., Allen	7,000	2,500	2,580
Texas Co., West Tulsa	15,000	12,000	12,000
Tide Water Oil Co., Drumright	15,000	11,000	11,000
Triangle Prod. & Ref. Co., Oklahoma City	1,500	1,200	1,200
Wilcox Oil & Gas Co., Bristow	6,000	2,590	2,420
Wirt Franklin Pet. Corp., Ardmore	4,000	(*)	(*)
Yale Oil Corp., Yale	2,000	(*)	(*)
Total	297,900	153,030	159,930

*Shut down.

(Continued on Page 18)

Natural Gas News

Southwest Gas Measurement Short Course at Norman

The Southwestern Gas Measurement Short Course at Norman, Okla., sponsored by the School of Natural Gas Engineering, University of Oklahoma, the Corporation Commission of Oklahoma and the Oklahoma Gas & Electric Utilities Association, will be held at the University at Norman on April 21, 22 and 23.

Professors of the university and representatives of manufacturers of gas measurement equipment conduct the short course each year for the benefit of members of the natural gas industry charged with the responsibility of measurement of gas. Classes are open to all measurement men in the industry as well as engineering students of the university who in large numbers have taken advantage of this opportunity each year.

The purpose of the Southwestern Gas Measurement Short Course is to increase the accuracy of measurement and the efficiency of regulation for the better serving of the public, more accurate and equitable adjustment of purchase and sale of natural gas and the dissemination through the industry of correct information regarding the highly technical engineering problems involved.

The general committee instructed E. E. Stoval, chairman of the program committee, to investigate the feasibility of increasing the scope of work given during this school by including papers on subjects not directly related to measurement, but which would be beneficial to the gas measurement man in his work. The publication committee was authorized to publish a bulletin covering the proceedings of the 1935 and 1936 short course, available to those who register for this year's course.

A meeting of the general committee will be held in March, at which time final reports will be given and arrangements completed for the 1936 short course. R. D. Turner, Tulsa, is chairman of the general committee. The subcommittee chairmen are W. H. Carson, Norman, banquet, entertainment and general arrangements; Gilbert Estill, Tulsa, exhibits; C. A. Breitung, Ada, registration and publicity; Ray Rountree, Houston, Tex., committee for the study of practical methods, and Max Watson, Amarillo, Tex., publications.

Other members of the 1936 committee are: E. Maurice Myers, Oklahoma City; A. E. Higgins, Dallas, Tex.; William F. Lowe, Tulsa; J. H. Satterwhite, Tulsa; W. H. McLaughlin, Tulsa; G. B. Lane, Dallas, Tex.; B. P. Stockwell, Oklahoma City; George P. Bunn, Bartlesville; L. G. Rheinberger, Tulsa; V. C. Jarboe, Bartlesville; Earl Knightlinger, Shreveport, La.; R. D. Hanley, Dallas, Tex.; Fay C. Walters, Kansas City; G. W. McCullough, Bartlesville, Okla.

Texas Law Decision

AUSTIN, Tex., Feb. 10.—The attorney general's department hailed as another step in enforcement of the gas conservation law refusal of the Federal District Court here to grant the Portland Gasoline Co. a restraining order.

Enjoining the Railroad Commission and other state officials from enforcing waste provisions of the act. A three-judge federal court may be convened later, probably in Houston, to consider an application for an interlocutory injunction.

This was the second suit brought by the company. It dismissed its petition at a hearing in Houston January 31.

Oil and Gas Association of Alberta

CALGARY, Alberta, Feb. 1.—The Oil and Gas Association of Alberta held a dinner meeting at the Hotel Palliser when C. C. Ross, minister of lands and mines, was the guest speaker. Mr. Ross foreshadowed cooperation by the government with members of the oil and gas industry and a more sympathetic attitude toward new development.

Papers were given by C. W. Dingman, director of petroleum and natural gas resources, and Dr. T. A. Link, chief geologist of Imperial Oil, Ltd. H. E. Greenfield, president of the association, was chairman.

Revise Gas-Oil Order

AUSTIN, Tex., Feb. 10.—The order authorizing a gas-oil survey in the Panhandle district was revised by the Railroad Commission and operators were cautioned to check distributions for correctness.

The revised order directed the gas-oil distribution "shall reflect the normal operating gas-oil ratio of the individual well on each lease."

Actual daily production as reported by the commission was directed used as the oil factor while the gas figure would be the actual volume produced while the well was operated under normal conditions. The ratio reflected by the report, it specified, "will be the producer's statement of the gas-oil ratio at which the individual well is operating to produce its daily allowable."

Saskatchewan Gas

REGINA, Saskatchewan, Feb. 8.—The Saskatchewan legislature will provide for a measure of provincial supervision of the natural gas industry, including the granting of franchises. Withers & Co. of Regina has made application to the municipal council of North Battleford, Saskatchewan for a gas franchise. It proposes to build a transmission line from the Lloydminster field in western Saskatchewan at a cost estimated between $1,500,000 and $2,000,000. It is expected the line will ultimately be extended to Saskatoon, and will serve communities convenient to the route.

Top row, left to right: W. R. McLaughlin, Earl Knightlinger, J. H. Satterwhite. Middle row, left to right: Max Watson, Ray Rountree, E. E. Stovall, G. W. McCullough, Fay C. Walters, L. G. Rheinberger, R. D. Hanley, V. C. Jarboe. Bottom row, left to right: Paul Stockwell, A. E. Higgins, R. D. Turner, Gilbert Estill, W. H. Carson

Refinery Work

New Refinery in Ogemaw Field

Carl J. Westlund, former manager of the Cardinal Oil Co. at Muskegon and an independent operator in several Michigan oil fields during recent years, is president of the Producers Refining, Inc., which has started construction of a new 1,500-bbl. refinery at West Branch, Mich., in the Ogemaw field. The plant will be the first erected in the Ogemaw County area which during 1935 produced as high as 3,000 bbls. a day though daily output since has declined to about 1,700 bbls. daily during winter months.

Inland Now Operating Plant

The new Inland refinery plant at Drayton Plains, near Detroit, Mich., went on stream last week with Michigan crude. The plant has a capacity of 2,200 bbls. of crude daily and planned to operate with 1,500 bbls. daily to start. It will convert crude from Crystal and other central Michigan fields into gasoline, kerosene, distillates and fuel oils, it was announced by Carl L. Skidmore, president. Tankcars and tank trucks filled the plant storage tanks with Michigan crude before the first run started.

Old Dutch May Construct

John Borden, president, and Dr. Clive M. Alexander, of St. Louis, engineering advisor of the Old Dutch Refining Co., Muskegon, Mich., last week conferred with V. V. Jacomini, president of the T.V.P. Corp., with regard to a proposed new $200,000 conversion unit for the Old Dutch plant.

Mr. Borden said the Old Dutch company may close negotiations soon with the T.V.P. Corp., subsidiary of the Petroleum Conversion Co., of New York, for the proposed Muskegon unit. Mr. Jacomini came to Muskegon from the company's Texas City, Tex., experimental plant.

Shell Petroleum Corp. has installed a large T.V.P. corporation unit at its plant at Wood River, Ill. No smaller commercial units as yet are in operation, it is understood, with the possibility Muskegon will be the first to test such a unit under commercial operation.

Start Wood-Moore Plant

A. F. Wood, president of the Wood-Moore Corp., has taken offices in the Second National Bank Building in Houston, Tex., from which he will direct the operations of the company's new 1,500-bbl. skimming plant at Port Lavaca. Plans are under way to expand the plant by the addition of cracking equipment and auxiliary skimming equipment so 2,000 bbls. may be processed daily. Operation of the new plant will be placed on a routine schedule within a few days. Mr. Wood will move to Houston within the next week, the Tulsa offices of the Wood-Moore and those of Dale Moore remaining unchanged otherwise.

Tyler to Remodel Cracking Unit

The Tyler Texas Refining Co.'s plant at Tyler, Tex., is to remodel its cracking unit at the plant to operate the Dubbs process. License agreement with Universal Oil Products Co. has just been made in order to make the necessary changes. The plant is owned by the McMurrey interests, headed by M. H. McMurrey. The plant was erected by G. L. Rowsey of Taylor, Tex., the plant's first name being the Taylor Refining Co.

Pipe Line Progress

Magnolia Pipe Line to Rodessa Will Be Constructed

NEW ORLEANS, La., Feb. 10.—Construction of a third pipe line into the Rodessa field is projected by the Magnolia Pipe Line Co. which is now making a survey of the right of way. It is estimated the cost of the line, which will run from Dixie to Rodessa, will be $125,000 for a 6-inch line or $150,000 for an 8-inch line. The line will be 25 miles long.

The new line will tie into the Magnolia's main line from El Dorado, Ark., to Beaumont, Tex. The 6-inch size would take 18,000 bbls. of crude oil daily.

The Standard Oil Co. of Louisiana and the Gulf Pipe Line Co. are now running approximately 21,000 bbls. of crude daily from the field.

New Proposal May Hasten Pipe Line to Detroit

NEW YORK, Feb. 10.—A new proposal for the settlement of differences between Columbia Oil & Gasoline Corp. and Missouri-Kansas Pipe Line over reorganization of Panhandle Eastern Pipe Line Co. is expected to be submitted to the "Mokan" receivers in the near future. This proposal would meet the objections of the receivers stated in their rejection of the first settlement plan. Efforts are being made to bring about an early agreement which will be in conformity with the Wilmington (Del.) Chancery Court consent decree, which provided for the recapitalization of Columbia Oil & Gasoline Corp. and Panhandle Eastern Pipe Line.

Until settlement is reached, the contract with the Detroit City Gas Co. cannot be consummated. In this contract to supply Detroit with natural gas, Panhandle Eastern is to spend about $8,000,000 and Columbia Gas & Electric about the same amount for construction and improvements. Panhandle Eastern is to be reorganized on the basis where "Mokan" will get one-half interest in Panhandle Eastern and Columbia Oil & Gasoline is to convert the $12,000,000 note issue of Panhandle into Panhandle convertible preferred stock. Because of the profitableness of the Detroit contract efforts are being made to speed agreement.

Rusk-Conroe Line

FORT WORTH, Tex., Feb. 10.—With construction work now under way the American Liberty Pipe Line Co. had laid 20 miles of new 8-inch line on its 115-mile connection from Rusk to Conroe furnishing East Texas a new outlet to the coast. The line will be finished and in operation about March 15, according to Dudley S. Golding, president of the company. Two tank farms, totaling 500,000 bbls. will be used. There will be five main line pump stations, construction of these to begin within 10 days.

In addition to the 115 miles of line from Rusk to Conroe, the American Liberty has begun the construction of a 5-mile extension of its present line, north into the Kilgore area.

New Eureka Director

OIL CITY, Pa., Feb. 10. — Directors of the Eureka Pipe Line Co. have elected W. P. Norris, of Parkersburg, W. Va., a director to succeed F. M. Kent of Parkersburg, retired. M. J. Leonard, of Parkersburg, was appointed superintendent to replace Kent.

All other officers and directors were reelected. Directors: Allan T. Towl, New York City; H. C. Dorworth, and D. L. Thomas, Oil City; E. W. Macklin and Norris, both of Parkersburg. Officers: F. M. Towl, New York, chairman of the board; Allan Towl, president; Macklin, vice president and general manager; T. M. Tussey, Oil City, vice president and treasurer, E. W. Ziegler, Oil City, secretary.

On a pipe line job

Longview-Rodessa Project

DALLAS, Tex., Feb. 10.—It is reported here the East Texas Refining Co. will build a pipe line from Longview to the Rodessa field in Caddo Parish, Louisiana, at an estimated cost of $400,000.

Freeman W. Burford, president of the company, would not confirm the report. The construction contract was reported let to Williams Brothers of Tulsa, the 57-mile line to be begun at once and in operation by March 15. Pipe was reported purchased and the right of way obtained.

The line will be of 8-inch welded pipe, with one pumping station at the Rodessa end, giving it a capacity of approximately 15,000 bbls. daily. The company has a 10,000-bbl. refinery and tank farm at Longview.

Shell Starting Construction on Line from Hobbs Field

HOUSTON, Tex., Feb. 10.—Shell Pipe Line Corp. has started construction of its 40-mile 10-inch welded pipe line from the Hobbs field in New Mexico, to the company's tank farm in the Hendricks field, Winkler County. Construction began at the Texas end and 15 miles of the line has been laid. The company's production in the Hobbs field has been handled through a 22-mile 8-inch line to an intersection with the Texas Pipe Line Co., which takes the oil as a common carrier to Shell Petroleum Corp.'s large tank farm in the Hendricks field.

The new line will have a daily capacity of 30,000 bbls. although it will not be run at capacity. From the Hendricks station Shell Pipe Line Corp. has two 6-inch lines which extend into McCamey where they tie into the company's main 10-inch trunk line that delivers oil to the Shell Petroleum Corp.'s refineries in Texas, Illinois, Indiana and Kansas.

Masterson Line

FORT WORTH, Tex., Feb. 10.—C. A. Middleton is planning to lay 8 miles of 2-inch line to connect wells in the Masterson pool, Pecos County, with a loading rack at Baldridge on the Santa Fe Railroad. He will pay 12½ cents per barrel below the posted price until 36,000 bbls. has been run, then will raise to the posted price. The oil is to be shipped to the McNutt Oil & Refining Co. at El Paso, Tex.

Natural Gasoline

Natural Gasoline Production Shows Decline in December

The daily average output of natural gasoline declined in December, 1935, according to a report prepared by the Bureau of Mines, the average in December being 4,951,000 gallons, a decline of 86,000 gallons from the high (since 1931) of November. The largest decrease in output in December was recorded in the Oklahoma City field. The daily average output in the Panhandle also declined, but not enough to indicate any material change in the status of gas conservation in that field. Production in these districts during December was as follows: Oklahoma City, 11,958,000 gallons; Panhandle, 24,329,000 gallons; and Kettleman Hills, 15,776,000 gallons. Production in East Texas increased from 7,221,000 gallons to 7,492,000 gallons but the daily average remained practically the same, 240,700 gallons.

Total production of the various districts for the month was: Appalachian, 3,931,000 gallons; Illinois, Michigan and Kentucky, 1,018,000; Oklahoma, 34,504,000; Kansas, 3,128,000; Texas, 44,603,000; Louisiana, 5,299,000; Arkansas, 1,001,000; Rocky Mountain, 5,113,000; and California, 51,871,000 gallons. Although the total production for December was 2,352,000 gallons higher than November, 1935, the daily average was 86,000 gallons less.

Stocks of natural gasoline at refineries continued to rise but the increase was again outweighed by a decrease in stocks at plants and terminals. Total stocks at both refineries and plants and terminals at the close of December were 155,316,000 gallons as compared with 164,640,000 gallons on hand at the beginning of the month. Texas recorded the greatest decrease in stocks during the month, reducing from 59,112,000 gallons on the first of the month to 55,219,000 gallons at the close, while California increased its stocks from 63,964,000 gallons to 65,895,000 gallons at the end of December.

"Direct" shipments of natural gasoline, or the movement to other points than refineries, totaled 22,931,000 gallons in December, or slightly more than in November. No particular trend in vapor pressures was evidenced in December. The average for refinery shipments increased to 21.5 pounds from an average of 21.3 pounds in November, but the average for exports declined.

The preliminary total for natural gasoline production in 1935 is 1,632,036,000 gallons, an increase of 6 per cent over 1934, but 27 per cent below the record of 2,233,688,000 gallons recorded in 1929.

Gasoline Absorption Plant

CALGARY, Alberta, Feb. 8.—Equipment for the new gasoline absorption plant of the British American Oil Co. in South Turner Valley is being hauled to the site, and erection will be started this month. The plant is expected to be in operation by May.

Double Superior Plant

The Superior Oil Corp. has practically doubled its gas handling capacity of its new Oklahoma City compressor plant through the addition of a second engine and an extension built on to its water cooling tower. The construction work is nearing completion and the new facilities will be operated on a routine schedule within a week.

Refiners in Mid-Continent Area Increasing Run Schedules

(Continued from Page 15)

NORTH LOUISIANA

Company and location—	Daily capacity	Av. daily runs Feb.	Jan.
Acme Ref. Corp., Monroe	100	50	50
Bayou State Oil Corp., Houston	800	300	400
Griswold Ref. Co., Shreveport	2,500	1,500	1,500
Louisiana Oil Ref. Co., Bossier City	23,000	20,000	20,000
Pelican Ref. Co., Converse	100	50	50
Rodessa Oil & Ref. Corp., Cedar Grove	7,500	3,800	3,800
Shoreline Oil Co., Lewis	1,000	600	600
Spartan Ref. Co., Shreveport	12,000	7,500	(*)
Stanolind Oil & Gas Co., Superior	4,500	2,000	2,000
Texas Co., Shreveport	7,000	(*)	(*)
Total	54,500	36,400	28,500

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Av. daily runs Feb.	Jan.
Allstate Ref. Co., Thrall	2,500	(*)	(*)
Baird Ref. Co., Baird	1,500	1,300	1,300
Canyon Oil & Gas Co., Inc., Cisco	500	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	3,600	3,400
Empire Oil & Refining Co., Gainesville	5,000	(*)	(*)
Exchange Pet. Corp., Albany	1,200	300	350
Falls Ref. Co., Wichita Falls	2,000	300	300
Gratex Ref. & Fuel Oil Co., Graham	500	250	190
Gulf Ref. Co., Fort Worth	10,000	4,000	4,000
Gulf Ref. Co., Sweetwater	7,500	4,500	4,050
Haskell Oil Ref. Co., Breckenridge	200	(*)	(*)
Hightower Oil & Ref. Co., Brownwood	750	300	300
Hill Ref. Co., Ballinger	50	50	50
Imperial Gas Corp., Fort Worth	1,200	300	300
Jacksboro Ref. Co., Jacksboro	50	50	50
LaSalle Pet. Co., Burkburnett	3,500	750	700
Magnolia Pet. Co., Fort Worth, No. 1	12,000	5,000	5,000
Marathon Oil Co., Fort Worth	5,000	3,900	3,870
Master Pet. Co., Hawley	500	500	500
Moutray Ref. Co., Hawley	1,000	600	600
Muenster Ref. Co., Abilene	300	(*)	(*)
New Deal Ref. Co., Abilene	300	(*)	(*)
Nolting Ref. Co., Sweetwater	1,000	(*)	(*)
Norgold Ref. Co., West Olney	400	200	200
Olney Oil & Ref. Co., North Olney	3,500	1,500	1,500
Omega Ref. Co., Brownwood	200	(*)	(*)
Panhandle Ref. Co., Wichita Falls	5,000	2,500	2,500
Panhandle Ref. Co., Leuders	600	500	500
Pilot Point Ref. Co., Pilot Point	500	100	100
Sinclair Ref. Co., Fort Worth	5,000	2,500	2,500
Southtex Ref. Co., Trent	250	(*)	(*)
Southland Ref. Co., Megargel	500	200	200
Southland Ref. Co., Olney	1,000	(*)	(*)
Starlight Ref. Co., Inc., Ballinger	500	400	400
Superior Ref. Co., Tiffin	500	(*)	(*)
Taylor Ref. Co., Taylor	6,000	800	200
Taxman Ref. Co., Wichita Falls	3,500	2,000	2,000
Texas Pacific Coal & Oil Co., Fort Worth	3,000	(*)	(*)
Texas Pacific Coal & Oil Co., Caddo	1,000	700	700
Tucker Ref. Co., Wichita Falls	250	150	150
Waggoner Ref. Co., Electra	6,000	3,200	3,000
Watt Ref. Co., Brownwood	200	200	200
Total	100,450	40,650	40,160

*Shut down.

EAST TEXAS

Company and location—	Daily capacity	Av. daily runs Feb.	Jan.
Acme Ref. Co., Gladewater	1,250	(*)	(*)
Adams Ref. Co., Big Sandy	1,000	130	130
Admiral Ref. Co., Kilgore	2,500	(*)	(*)
Artex Ref. Co., Arp	2,000	300	(*)
Bartlett Ref. Co., Kilgore	2,500	(*)	(*)
Beacon Oil & Ref. Co., Henderson	4,000	250	520
Blue Diamond Refining Co., Gladewater	1,500	(*)	(*)
Bradley Ref. Co., Kilgore	2,000	100	100
Cascade Ref. Co., Reeds Switch	3,000	1,350	1,350
Central Ref. Co., Gladewater	2,000	600	(*)
Century Refining Co., Friars Switch	2,500	(*)	(*)
Chief Ref. Co., Gladewater	2,000	300	1,000
Danciger Refineries, Inc., Longview	10,000	(*)	(*)
Deason Ref. Co., Turnerstown	500	(*)	(*)
Dominant Ref. Co., Kilgore, No. 1	4,000	(*)	2,040
Dominant Ref. Co., Kilgore	2,000	(*)	750
East Texas Cracking Co., Camp Switch	4,200	(*)	230
East Texas Ref. Co., Longview	10,000	6,000	6,330
Friar Topping & Ref. Co., Friars Switch	2,000	(*)	(*)
Gilliland Ref. Co., Gladewater	4,000	2,200	2,250
Gilliland Ref. Co., Overton	5,500	2,000	1,970
Gilmer Ref. Co., Gladewater	1,000	(*)	50
Godlin Ref. Co., Gladewater	500	(*)	(*)
Heath Ref. Co., Camp Switch	1,000	(*)	130
Holmes Ref. Co., Gladewater	1,500	(*)	(*)
Hub Oil Refining Co., Reeds Switch	3,000	(*)	(*)
Hunter & Knox Refining Co., Overton	750	(*)	(*)
Hurricane Pet. Corp., Overton	4,500	2,400	2,000
Johnson Ref. Co., No. 1, Kilgore	1,200	(*)	50
M. S. Johnson Ref. Co., Gladewater	1,250	350	250
Keystone Ref. Co., Gladewater	1,000	(*)	(*)
Kilgore Reclamation Co., Kilgore	2,000	(*)	80
Lake Ref. Co., Gladewater	2,500	320	320
La Petite Ref. Co., Joinerville	800	(*)	(*)
Lapren Ref. Co., Kilgore	2,500	(*)	(*)
London Topping & Ref. Co., Overton	1,000	(*)	(*)
Lotus Ref. Co., Gladewater	1,750	(*)	(*)
Master Pet. Co., Waco	1,000	(*)	(*)
Matthews Ref. Co., Gladewater	1,000	600	530
McKain Ref. Co., Gladewater	1,500	(*)	(*)
McMurray Ref. Co., Arp	4,000	1,100	1,300
Magnolia Pet. Co., Corsicana	5,000	4,200	4,000
National Refining Co., Camp Switch	1,000	(*)	70
North Texas Ref. Co., Gladewater	1,500	(*)	(*)
Ocean Ref. Co., Kilgore	2,300	1,700	1,840
Outdoor Ref. Co., Kilgore	900	(*)	(*)
Overton Ref. Co., Overton	3,000	(*)	(*)
Ozazo Ref. Co., Friars Switch	1,200	(*)	(*)
Panama Ref. Co., Kilgore	3,000	(*)	1,090
Pelican Ref. Co., Gladewater	750	(*)	(*)
Pelican Ref. Co., Gladewater	1,000	(*)	(*)
Pennant Ref. Co., Kilgore	500	(*)	(*)
Pope Ref. Co., Gladewater	1,500	(*)	120
Premier Oil Ref. Co. of Texas, Greggton	4,000	2,400	3,000
Rusk Oil & Ref. Co., Overton	2,000	(*)	370
Shoreline Ref. Co., Kilgore	4,000	(*)	(*)
Simms Co., West Dallas	4,000	(*)	(*)
Sinclair Ref. Co., Camp Switch	3,500	3,100	2,000
Solvex Refineries, Inc., Gladewater	7,500	2,400	1,610
Southern Oil Ref. Co., Reeds	3,000	(*)	(*)
Southport Ref. Co., Kilgore	5,000	1,400	3,030
Stag Ref. Co., Kilgore	1,200	(*)	(*)
Supreme Ref. Co., Gladewater	1,200	(*)	(*)
Swastika Ref. Co., Kilgore	3,000	300	510
Texas Co., Dallas	16,000	8,500	9,000
Texas Oil Products Co., Gladewater	3,000	2,100	1,890
Texas Ref. Co., Kilgore	200	(*)	(*)
Texas State Ref. Co., Kilgore	1,000	(*)	70
Trinity Ref. Co., Gladewater	6,000	1,300	2,160
Trio Ref. Co., Arp	2,500	1,400	1,470
Tyler, Tex., Ref. Co., Tyler	15,000	3,400	1,170
Tyreco Ref. Co., No. 1, Arp	2,500	1,950	1,190
Tyreco Ref. Co., No. 2, Overton	3,000	1,300	1,140
Union Ref. Co., Kilgore	3,000	(*)	(*)
Upshur Ref. Co., Gladewater	1,000	(*)	(*)
Utah Ref. Co., Kilgore	3,000	1,300	(*)
Wabash Ref. Co., Gladewater	1,000	500	470
Wichita Ref. Co., Gladewater	1,000	(*)	190
Wilemon Ref. Co., Overton	1,000	500	(*)
Witeners Ref. Co., Gladewater	1,500	(*)	240
Wolfe Ref. Co., Kilgore	1,000	(*)	(*)
Total	233,150	57,190	61,110

*Shut down.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Av. daily runs Feb.	Jan.
Amoco Ref. Co., Mirando City	4,500	3,200	3,000
Bennett Ref. Co., San Antonio	500	500	500
Bennett Ref. Co., Bruni	900	600	500
Capitol Ref. Co., Luling	2,500	(*)	(*)
Chapa Ref. Co., Laredo	100	(*)	(*)
Citizens Ref. Co., Luling	200	50	50
Humble Oil & Ref. Co., Ingleside	15,000	9,000	9,000
Humble Oil & Ref. Co., San Antonio	5,000	3,000	3,000
Magnolia Pet. Co., Luling	7,000	4,000	4,000
Midway Oil & Ref. Co., Pettus	1,000	500	500
Pettus Ref. Co., Pettus	1,000	900	800
Pettus Ref. Co., Mathis	1,000	600	300
Pioneer Oil & Ref. Co., Somerset	2,000	1,400	1,000
Rado Ref. & Prod. Co., McAllen	500	200	250
Texas Co., San Antonio	3,000	3,000	3,000
Texas Pet. Prod. Co., Somerset	1,500	250	250
Valley Ref. Co., Harlington	1,000	600	600
Total	46,700	27,800	27,250

*Shut down.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Av. daily runs Feb.	Jan.
Active Oil Co., Arno	1,500	(*)	(*)
Aero Ref. Co., Pecos	220	100	100
Coltex Ref. Co., Colorado	12,500	5,000	5,000
Concho Ref. Co., San Angelo	250	100	100
Cosden Oil Co., Big Spring	10,000	5,000	5,000
Danciger Refs., Inc., Pampa	6,500	5,000	5,000
Gibson Oil Corp., Magic City	250	(*)	(*)
Howard County Ref. Co., Big Spring	2,500	500	500
Morrison Ref. Co., Mertzon	100	50	50
McNutt Ref. Co., El Paso	2,000	750	750
Panhandle Ref. Co., Kings Mill	2,000	1,000	1,000
Paramount Pet. Co., San Angelo	2,000	(*)	(*)
Phillips Pet. Co., Borger	50,000	20,400	19,350
Shamrock Oil & Gas Corp., Sunray	2,000	2,000	1,500
Shamrock Oil & Gas Corp., Meldavis	1,600	1,500	1,200
Sinclair Ref. Co., El Paso	4,000	(*)	(*)
Standard Oil Co. of Texas, El Paso	14,000	6,500	6,000
Texas Co., El Paso	2,000	1,000	1,000
Texas Co., Amarillo	4,000	2,000	2,000
West Texas Ref. Co., Pecos City	6,000	(*)	(*)
Wickett Pet. Co., Wickett	2,500	600	600
Total	125,920	59,500	55,950

*Shut down.

OBITUARY

E. E. PLUMLY, 64, vice president of Magnolia Petroleum Co. and general manager of refineries, died February 7 at his home in Beaumont, Tex. His death was due to pneumonia. Mr. Plumly had been connected with Magnolia Petroleum Co. since 1903, when that company was formed and took

E. E. PLUMLY

over the properties of the J. S. Cullinan Co. At that time, he was superintendent of the Cullinan refinery at Corsicana, having risen from stillman. He was moved immediately to Beaumont to become superintendent of the plant constructed there. In 1913 he was made manager of refineries and a director in the company, and in 1929 was elected vice president. As manager of refineries he had supervision over the Luling and Corsicana plants as well as the Beaumont refinery.

He was born on a farm in Ohio. When 18 years old he went to work for Standard Oil Co. of New York as a laborer in the refinery at Olean, N. Y. He was advanced to gang foreman, and in 1898 went to Corsicana as a stillman in the Cullinan refinery.

W. P. BICKLEY, 79, oil producer, of Electra, Tex., died at his home February 9.

P. A. LECHNER, SR., 79, father of Walter W. Lechner, of Dallas, Tex., oil producer in East Texas, died February 4 at his home in Terrell, Tex., where he had lived 46 years.

L. W. MOREFIELD, 39, died in a Tulsa hospital Thursday night. He became ill Saturday. Born in Morehead, Ky., he followed the oil business through Louisiana to Oklahoma. He superintended the laying of many miles of pipe line over the Southwest. He had been in Oklahoma at intervals since 1914, and a resident of Tulsa since 1922.

JOHN BIRD, 53, for 40 years prominent in development of North Louisiana's oil fields, died in Shreveport, February 8. With his brother, Thomas Bird, he erected the Marine Oil Refinery in Cedar Grove. He moved to Shreveport when the Caddo oil field was discovered. In 1918 he was among the first operators in Gusher Bend, the present Bull Bayou field of Red River Parish. His activities next spread to the Homer field of Claiborne Parish.

In his own hands

A refiner may have to buy his crude oil at the seller's price and sell his products at the buyer's price but there is one stage of the game that is in his own hands

From the time the crude is pumped into his plant until the refined products are loaded out the refiner is boss That is where his chance for profit lies What he does with it is up to him

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Oil News from Foreign Lands

Germany Is Making Progress in Developing Substitutes

While Germany is making progress in her efforts to develop substitutes for petroleum products the domestic demands for all types of fuels and burning oils has increased faster than the output of substitutes so that the country is more and more dependent on petroleum. Over the past year Germany's crude oil production has increased about 35 per cent but despite this gain and the production of substitutes it has been necessary to enlarge her imports of both crude oil and refinery products from other countries.

GERMANY

Little progress was made in 1935 in the use of gas from solid fuels or from storage cylinders as fuel for cars according to William Ware Adams, vice consul at Berlin. In a report he points out that these fuels are mainly adaptable to heavy, slow vehicles operating in one locality. The city of Hanover has a few trucks and street sweepers operating on gas from solid fuels. The national forestry service regularly uses charcoal in its transportation division. It is estimated that not more than 1,000 motor vehicles use these fuels in all of Germany.

The Leuna plants of the I. G. Farbenindustrie are the largest single producing group of synthetic gasoline according to the report. Actual production ranges from 300,000 to 350,000 metric tons of gasoline yearly. This is distributed through the Deutsche Gasoline A.G. The Bergius process is used and lignite furnishes the principal material although experimental hydrogenation of hard coal is carried on.

The report further explains: "The group next in importance is the Braunkohlen-Benzin A.G. which was founded in 1934 by the organization of all important lignite mining companies in the Braunkohlen Pflichtgemeinschaft formed for the purpose of furthering research in the production of synthetic gasoline. Plants already under construction by the Braunkohlen-Benzin A.G. near Leipzig and Madgeburg have a planned capacity of about 500,000 metric tons of gasoline to be produced from lignite by the Fischer low-temperature hydrogenation process. They are expected to begin producing at full capacity in 1937.

"The use of hard coal and hard coal coke for the production of synthetic gasoline has not as yet been undertaken on a similarly large scale. Several small experimental plants have been erected by various companies of which that founded by the Ruhr Chemie A.G. is the most important. This company holds the right to the Fischer process and is able to issue licenses for its use. Under one of these, the Ruhr Benzin A.G. was founded in October, 1935, to operate in the Rhine-Westphalian mining district. Its initial output will be 25,000 metric tons of gasoline.

"Two other firms that have engaged in the production of synthetic gasoline from hard coal in the Fischer process are the Kloeckner concern, which cooperates with the Wintershall A.G., and Rheinpreussen A.G. The former produces about 30,000 tons of gasoline annually and the latter will produce 25,000 tons when its plant is fully completed.

"Annual production of the foregoing plants at the present time therefore, ranges between 330,000 and 380,000 metric tons of gasoline, and the planned capacity of plants already under construction totals about 600,000 tons, making an annual production of something over 900,000 metric tons possible upon completion of those now being erected.

"To this may be added the amount of benzol and gas oil produced locally as well as the domestic alcohol which constitutes 10 per cent of the gasoline mixture sold by all retail filling stations. It appears that at the present moment the domestic output of synthetic gasoline, benzol, and gas oil, together with the 10 per cent admixture of alcohol which is produced locally, is proceeding at an annual rate of about 1,100,000 metric tons. This approaches one-half of the domestic consumption of these motor fuels which amounted to something more than 2,500,000 tons."

Labor Difficulties in Mexico Shut In Production

Crude oil production of the Huasteca Petroleum Co. in the Ebano field of Mexico amounting to approximately 10,000 bbls. daily has been shut in over the past week due to labor difficulties. A week ago about 450 employes belonging to the production union walked out after making a large number of demands seeking higher wages and other major changes pertaining to their employment.

MEXICO

The management of Huasteca which is the principal producing subsidiary in Mexico of Standard Oil Co. (New Jersey) interests has refused to grant the union's demands and negotiations between representatives of the union and the company are now under way under the sponsorship of the Federal Labor Board. It is reported the board has ruled that 44 per cent of the company's employes must be retained on the pay roll to serve as watchmen during the period of the strike. The union had asked that 66 per cent of the employes be retained.

Government Sponsors Test

Under government sponsorship test drilling will take place in New Zealand this year, according to a report of the International Petroleum Trade. It is said that good indications of oil structure have been found in the Taranaki region (west part of the North Island) and it is believed that oil will be found at shallow depths. In the past there has been very little actual drilling for oil in New Zealand, the broken structure with a prevalence of faults being an unfavorable geological condition.

NEW ZEALAND

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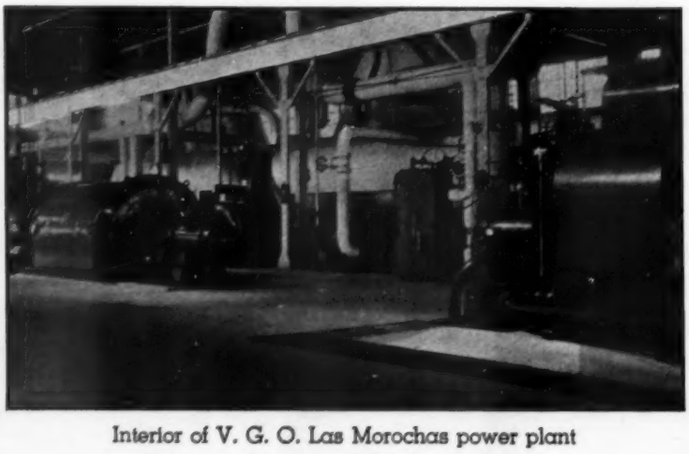

Interior of V. G. O. Las Morochas power plant

Oil Production in Venezuela Is Increased in January

Crude oil production in Venezuela totaled 12,932,533 bbls. in January or 417,179 bbls. daily. This is an increase of 12,000 bbls. daily over the average for January, 1935, but 4,500 bbls. less than the average in December. The January output of crude oil was in line with the average production for the fall months of 1935.

Except for Mene Grande and Quirequire the trend in crude oil production in January was up from December. The production in Mene Grande varies considerably from month to month, depending in part on demand, and in December the output was abnormally high. This fact accounts for the 200,000-bbl. reduction in January. Crude oil production in Quirequire was also approximately 200,000 bbls. less in January than in December. Lagunillas recovered from the slump in December brought about by a partial shutdown for a few days following the death of General Gomez when labor troubles developed. Reports from all fields in January indicated that labor conditions were normal.

VENEZUELA

The following table gives the production by months and companies (barrels):

BY FIELDS

	January 1936	January 1935
Lagunillas	7,052,503	7,043,637
La Rosa-Ambrosio	1,996,879	1,660,302
Quirequire	1,653,330	1,491,592
Mene Grande	1,417,878	1,382,600
Tarra	459,017	476,190
Cumarebo	166,430	278,952
Concepcion	109,616	129,642
El Mene	64,139	80,000
La Paz	12,741	16,926
Total	12,932,533	12,559,841
Daily average	417,179	405,156
December	.....	421,820

BY COMPANIES

Lago Petroleum Corp.	4,190,355	4,182,232
Venezuelan Oil Concessions, Ltd.	3,162,217	3,057,468
Creole Petroleum Corp.	2,274,927	2,093,351
Venezuelan Gulf Oil Co.	1,364,000	1,288,000
Caribbean Petroleum Co., Ltd.	1,417,878	1,382,600
Colon Oil Corp.	459,017	476,190
British Controlled Oilfields, Ltd.	64,139	80,000
Total	12,932,533	12,559,841

Among the operating companies Creole Petroleum Corp. and the Venezuela Gulf Oil Corp. were the only companies whose January production was substantially above the same month in 1935. The Gulf company has been able to increase its production in the lake region through the installation of pumping equipment and the drilling of additional wells in the proven territory. The Creole increase is largely due to the enlarged output in the Quirequire field of eastern Venezuela which it controls. The production of this field has shown little change in recent months.

A recent report of the Department of Commerce covering exports of crude oil from Venezuela for the first six months of 1935 shows that the bulk of the present production goes to refineries off the coast in Netherlands West Indies and the United States. The largest user of the Venezuelan crude oil is the Aruba refinery of the Lago Oil & Transport Co. (Standard of New Jersey) which furnishes an outlet for a large part of the crude oil produced by the Lago company and the Creole corporation which are Standard of New Jersey units. On the same island Arend Petroleum Maatschappij (Shell) has a 20,000-bbl. refinery. This plant and the much larger refinery of the Curacaosche Petroleum Industrie Maatschappij (Shell) on the Curaco Island take most of the production of the Shell producing units in Venezuela.

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Another Raise?

The very heavy increase in stocks of motor fuel caused by the slump in consumption following the onset of the nationwide blizzard had less effect on the market than expected. Despite an addition to storage in one week as large as usually is added in a month at this season the price structure has been fairly well maintained and unless the restraints of prudence are abandoned it can be held until the opening of the spring market.

Credit for this situation can be attributed to several factors. Stocks have been kept within reasonable limits. Belief that the severity of the weather would at this time of year be of brief duration encouraged holding on rather than risking demoralization of the market by letting go. Besides, there was the growing confidence in cooperation established by the fruits of experience in the past several months.

The lesson of the advance in crude, conditioned on stabilization of the refined market, indicated the course clearly. Unsettlement in the gasoline market through distress offerings would postpone better prices for crude and in turn handicap the refined market on the eve of the main season.

All these considerations, together with the fact that the zero weather had limited buying to current needs, aided in supporting the market.

This steadiness during what would in the past have been a period of crisis, has increased hope of a further advance in crude prices. General opinion shares the belief attributed to one leading executive that "if we can get through the current season of low demand I look for another raise a little later, perhaps about the same size as the one recently made."

This possibility should have a strengthening influence since it adds weight to the argument for avoiding either overproduction or unloading below the market and since the interval of waiting is so short there will be redoubled effort to hold on.

Having come through so much and so far, a few weeks cannot be allowed to jeopardize an entire year.

Misplaced Emphasis

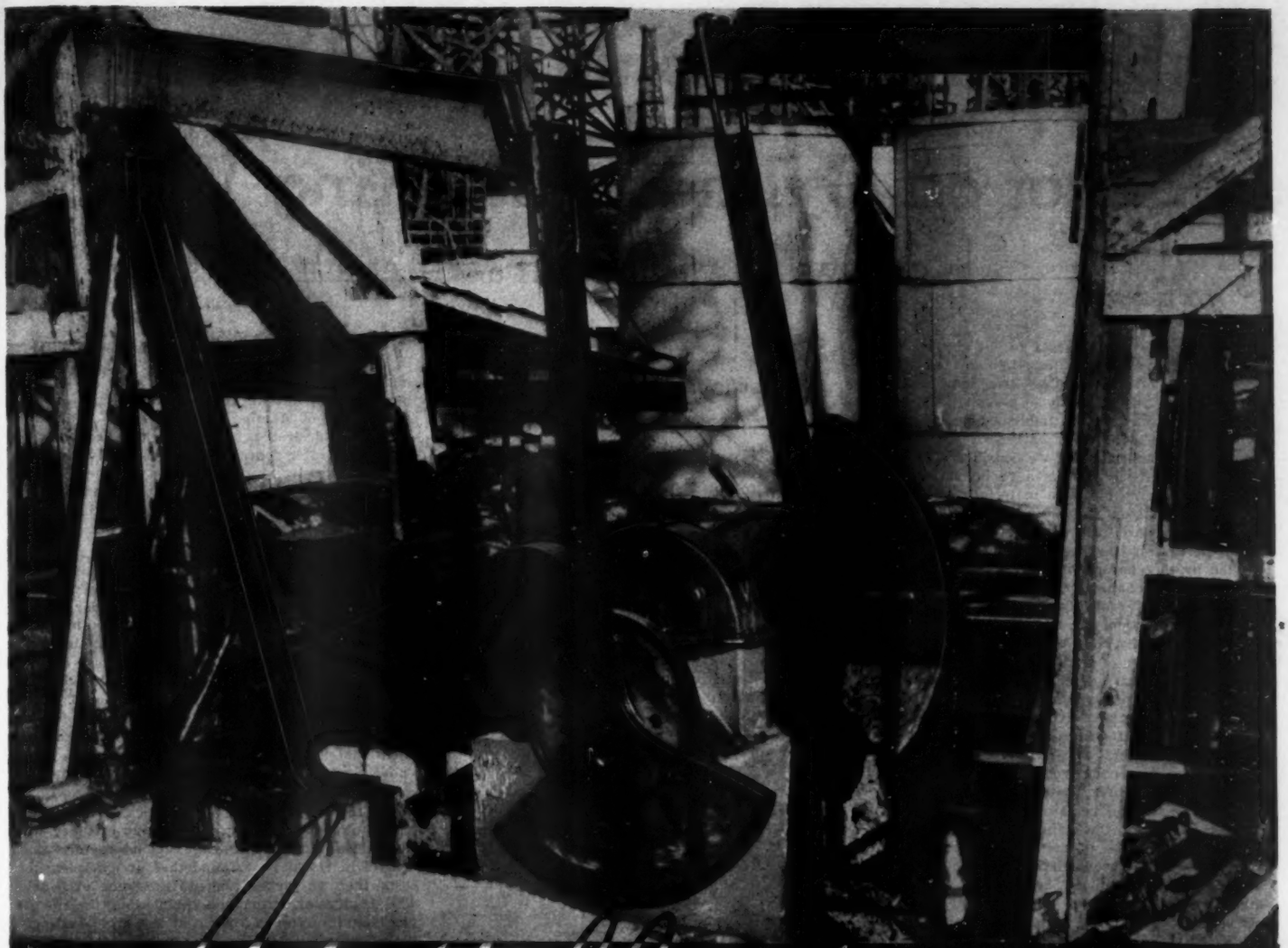
There are gratifying indications people are doing a lot of thinking about public questions these days. They are not so ready to believe all they hear. They have run up too many blind alleys.

Many are beginning to question whether reliance on taxation to get us over our difficulties is not going to increase them and to ask for a constructive alternative.

This has been put very pithily by T. M. Girdler, a leader in the steel industry, when he said: "Those who propose to tax business place major emphasis upon provision for unemployment whereas if you are going to solve the unemployment problem the emphasis should be put upon policies which will make for steady and increasing employment in industry. Measures which tend to discourage business through threat of a tax burden are helping to prolong the very unemployment we all seek to relieve."

In the steel industry, he said, "we very definitely see the possibility of steady work over a long period providing we can plan with some assurance for the future."

This is the view of industry and business in all branches. Demand which has been accumulating for five years awaits buying power; buying power waits for employment; employment waits upon assurance that industry and business can go ahead. As Mr. Girdler says: "Never in the history of the country has there been greater need for investment and man power in industrial requirement than there is today."



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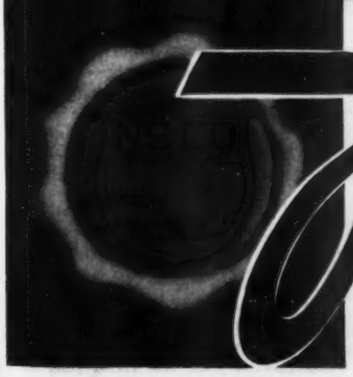

National

Lubricating Oils Studied to Determine Effect on Cylinder and Ring Wear

By C. M. LARSON, W. G. AINSLEY and M. FAIRLIE
Sinclair Refining Co.

A discussion of the effect of oil characteristics on cylinder wear and ring sticking tendencies of automobile, bus and aircraft engines is printed here in part from a paper presented before the Society of Automotive Engineers.

The effect of oil characteristics on cylinder wear and ring sticking tendencies is the subject of considerable investigation at the present time. In any study of wear it is necessary to refer to many papers published on the subject which in the main cover causes of wear not related to the lubricant. If we consider all the factors which have been shown to be major causes of wear, such as abrasive material, cylinder surface finish, piston finish and hardness, ring design and pressure, and cylinder distortion, only a small portion of the total wear remains to be controlled by the characteristics of the lubricant. The relation of mechanical condition of an engine to ring sticking is probably just as important as it is to wear, particularly as regards the important factor of blow-by, but tests have indicated that certain properties of the oil may materially reduce this ring sticking.

In making a preliminary study of these factors it was found that abrasives account of a considerable proportion of wear and may exist in several forms and in several places in engines. Recent papers[1,2] have shown that road dust and the like, induced with the intake air to the engine, is a major cause of wear, and certain cylinders suffer more wear than others, the cylinder receiving the richest mixture because of manifolding arrangements receiving also the greatest proportion of abrasives. The use of highly efficient air cleaners may largely eliminate this source of abrasive material. Most air cleaners now in use require some attention for continued efficient operation, and the average car owner pays little attention to this vital part of the engine.

New engines almost always contain traces of metal and other abrasive particles left from machining and grinding operations. A portion of these becomes reduced to a fine state of subdivision, and together with fine metallic particles resulting from normal break-in period can cause considerable wear. The use of certain fuel dopes result in the production of dry powdery materials which if not abrasive in all cases, at least tend to have a drying effect on the oil film in the top ring groove. Analysis of top groove deposits has shown 88 per cent insoluble in $CHCl_3$ (mostly carbon) and 10 per cent ash containing metallic oxides from engines run in a relatively dust-free atmosphere.

Cylinder wear is much influenced by original cylinder surface finish. With the advent of mirror finish cylinder honing wear has been reduced considerably.[3] Hard cylinder liners of 450 Brinell and higher, increase piston and ring wear substantially unless a high cylinder surface finish is used.

Cylinder distortion is a factor which has a pronounced effect on wear in that a series of tests may become meaningless if head bolts are not tightened to the same tension for all tests. Natural easing of head bolt tension through gasket compression may have an effect if sufficient checking of nut tightness is not made. Oil consumption, blow-by, and high spots in cylinder contour are all related to distortion. A precision wrench is necessary to duplicate head bolt tension in making duplicate runs. Piston ring construction, pressure, and evenness of distribution of pressure all exert their effect on ring and cylinder wear.

In so far as lubricants affect cylinder and ring wear there are several conditions of major importance. The quantity of oil at any pair of rubbing surfaces is very important; there are certain groups of engines that are definitely over-lubricated, and there are others that definitely are under-lubricated. In this connection the relationship of oil consumption to blow-by, wear, and ring sticking is varied with different designs of piston rings, varying distortion, and cylinder surface temperatures.

Concerning the relation of oil characteristics to wear and ring sticking the following points are of interest: Wear unquestionably occurs in normal service during cold starting and warming-up periods of operation.[4] The oil characteristics leading to ease of starting, such as high V.I. and low pour, are desirable in this respect. Stability is also a desirable feature in that excessive tar formation, viscosity rise, and carbon residue rise lead to deposits under piston crowns and under piston rings. This in turn will cause ring sticking, which will increase blow-by, oil consumption, cylinder wear and scoring.

Cylinder wear on two automobile engines used in a laboratory study of motor oils is given in Table 1. These engines were always under laboratory supervision and every effort was made to eliminate the causes of wear outlined in the early part of this discussion. Oils used in these engines consisted of conventional and solvent treated oils from the three main crude sources, none of which contained any added agents. The amount of wear is shown to be very small in both cases, which indicates that in making any comparison of the wear characteristics of motor oils, great care must be exercised.

On the subject of piston ring sticking, tests indicate that this is largely governed by cylinder surface temperatures and the various factors that control it. It has been found that by dynamometer tests that at jacket temperatures not exceeding 190° F. normal automobile engines may be run on oils containing up to 5 per cent tar, an exceedingly high figure, without causing stuck piston rings. As the jacket temperature rises, the susceptibility to oil depreciation becomes much greater, so that at 250° F. jacket temperature, tests may be made to give reasonably good indications of the ring sticking properties of oils. Above this jacket temperature results appear to become somewhat erratic. Table 2 gives a list of such engine tests. Figure 1, on a series of oils of widely varying stability. In these tests the use of a four-cylinder engine was found to give a reasonable picture of the ring sticking characteristics.

The method of computation of the engine test work factors[7] shown in Table 2 is as follows:

1. For viscosity change:

$$\text{Engine test work factor} = 1.00 - \frac{\text{Fin. vis. at 210°} - \text{In. vis. at 210°}}{\text{Initial vis. at 210°}} \times C$$

C=1.3 and was developed to give a positive viscosity work factor on the most unstable oils.

2. For tar, neut. number and carbon residue changes:

$$\text{Engine test work factor} = \frac{\text{FRP—Final content}}{\text{FRP—Initial content}}$$

FRP=2.0 for tar; 3.0 for carbon residue and 4.0 for neutralization number. Selected on the same basis as the viscosity constant.

In continuance of the study of ring sticking, some tests made specifically to determine the influence of the characteristics of the fresh oils, in

TABLE 1—MAXIMUM WEAR IN THOUSANDS OF INCHES

8-Cylinder passenger car engine run the equivalent of 50,000 miles on laboratory dynamometer at 70% load:

Cylinder No.	1	2	3	4	5	6	7	8
	.0005	.0005	.0005	.0010	.0010	.0010	.0010	.0005

8-Cylinder passenger car engine run 25,000 miles in road test service:

Cylinder No.	1	2	3	4	5	6	7	8
	.0005	.0005	.0010	.00075	.00075	.00075	.00075	.00075

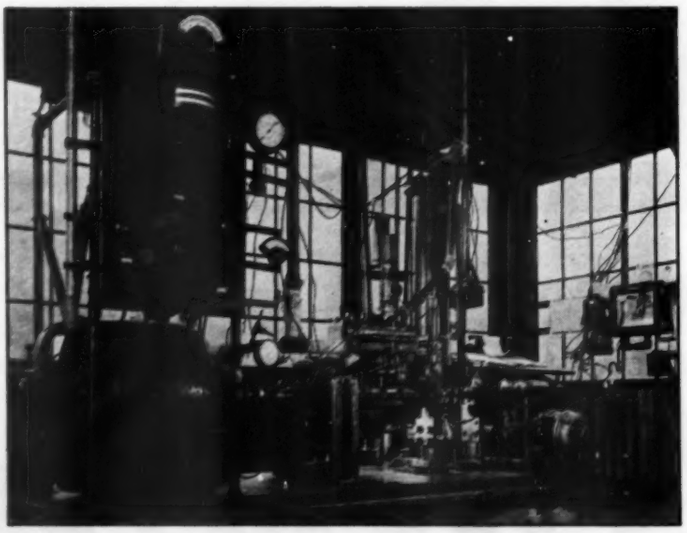

Fig. 1—Four-cylinder dry sump engine used to study ring sticking characteristics of motor oils

contrast to the above results where ring sticking occurs only after very considerable depreciation of the oil. These tests were made by running the same four-cylinder engine on the dry sump lubrication system, using 25 gallons of each of oils 2 and 5 in Table 3. The object of using this large quantity of oil was to reduce as much as possible the depreciation of the oil during the 50-hour tests. Two engine tests were run on each oil, one at 225° F. jacket temperature, one at 250° F. jacket temperature.

TABLE 2—250° F. JACKET TEMPERATURE ENGINE TESTS ON FIVE BASIC OILS OF VARYING STABILITY

	Oil 1		Oil 2		Oil 3		Oil 4		Oil 5	
	Highly solvent treated Penna. SAE 30		Mildly solvent treated Penna. SAE 30		Conventional nonsolvent treated Penna. SAE 30		Acid treated Mid-Continent SAE 30		Regular Gulf Coast SAE 40	
	New	Used	New	Used	New	Used	New	Used	New	Used
Viscosity at 100° F.	398	698	444	760	445	757	533	842	1244	2904
Viscosity at 210° F.	61	79.5	61	81.3	61	82.4	61	77.0	71	124
Neutralization No.	.015	1.281	.015	1.54	.015	1.49	.015	1.21	.015	1 938
Conradson carbon	.299	1.664	.350	1.530	.377	2.018	.340	2.067	.049	2 230
Sludge	.....	.202	.....	.344	.....	.381	.....	1.354	.....	2 000
Chloroform soluble (tar)	.....	.....	.....	.309	.....	.328	.....	1.291	.....	1 820
Ind. sludging time (hrs.)[5]	375	.....	125	.....	90	.....	25	.....	16	.....
Sinclair Oxidizer[6] induction period (hrs.)	300	.....	210	.....	150	.....	81	.....	68	.....
Vis. rise at 100° F.	300		316		312		309		1660	
Vis. rise at 210° F.	18.5		20.3		21.4		16.0		53 0	
Neut. number rise	....		1.525		1.474		1.195		1.923	
Carbon rise	1.365		1.180		1.642		1.727		2.181	
Work factor—										
Vis. at 210° F. (C=1.3)	.606		.567		.542		.659		0.030	
Con. carbon (FRP=3.0)	.494		.555		.373		.350		.261	
Acid number (FRP=4.0)	.682		.617		.630		.700		.518	
Tar (FRP=2.0)	.899		.828		.810		.323		.000	
Average work factor	.670		.642		.589		.508		.202	
Piston ring condition after test	1 ring stuck per piston		1 ring stuck per piston		Av. 1.5 rings stuck per piston		Av. 2 rings stuck per piston		Av. 2.5 rings stuck per piston	
	Total 4		Total 4		Total 6		Total 9		Total 10	

Oil 2 is a stable oil (100 hours Indiana sludging time) while oil 5 is an unstable oil (16 hours Indiana sludging time). In the Sinclair oxidizer oil 2 has induction period of 210 hours and oil 5 of 68 hours. The runs on the stable oil resulted in all rings being free and clean without any trace of carbonaceous deposit. There was practically no change in the viscosity or carbon residue of the oil. The runs on the unstable oil

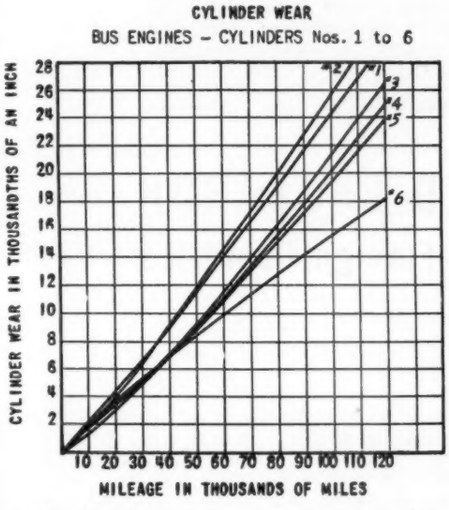

Fig. 2—Plot showing comparative wear of six cylinders over approximately 120,000 miles

resulted in an average of two out of three rings being stuck in each piston, suggesting that the decomposition of this oil while it is actually in and passing the piston ring grooves caused the rings to stick. There was practically no change in the oil (Table 3). However, the original carbon residue of the stable oil was about 10 times that of the unstable oil. This suggests that low original carbon residue is not so important a factor as general stability, which prevents rise in carbon residue, viscosity, and tar formation in service.

From this study the following conclusions may be drawn:

(1) Only a small portion of the total automotive engine wear may be attributed to the effect of properties of the lubricant; (2) assuming high mechanical and combustion efficiency, the ring sticking tendencies of a gasoline engine depend to a considerable extent upon the general stability of the lubricant; (3) the longer the characteristics of the fresh oil persists in actual service, the freer will the engine remain from piston ring sticking.

Bus Engines

Checking cylinder wear in actual bus service usually extends over periods of one to two years duration. The test data obtained from W. J. Cumming[8], Surface Transporttion Co., is characteristic of the results secured on buses operated in high gear over suburban routes and in low gear in thickly congested urban service. In these tests of long duration, the development of wear for each

TABLE 3—DRY SUMP RING STICKING ENGINE TESTS

50-Hour Tests at 250° F. Jacket Temperature

	Oil 2 Highly stable		Oil 5 Highly unstable	
	New	Used	New	Used
Vis. at 100° F.	444	416	1244	1051
Vis. at 210° F.	61.0	60.3	71.0	67 5
Vis. index	99.7	104.0	—3.0	+5.1
Neut. number	.015	.090	.015	.088
Carbon residue	.350	.387	.049	.097
Per cent tar	.000	.000	.000	.000
Per cent dilution	.....	1.2	...	1.2
I.S.T. hours[5]	125	.....	16	.....
Sinclair Oxidizer induction period (hrs.)[6]	210	.....	68	.....
Piston ring conditions:	No rings stuck. Grooves clean.		Two of 3 rings per piston stuck. Carbonaceous deposits.	

cylinder was recorded in 20,000-mile period increments, from the time of the new engine initial life up to 120,000 miles of life. Each of the six cylinders was measured and recorded separately.

The comparative wear in all six cylinders is shown in Figure 2. It will be noted that the wear in No. 1 and 2 cylinders is greater than that in Nos. 5 and 6. The heat factor enters here, as the water entering the block makes cylinders Nos. 1 and 2 run cooler than 5 and 6.

A study of the bus engine cylinder wear and the factors that enter into it aids in definitely prolonging engine life. It has already been shown that the selection of proper iron alloys, the prevention of blow-by, the dissipation of heat and the reduction of friction through the use of lighter engine lubricating oils tend towards less wear and lower maintenance costs.

Aircraft Engines

The safe extension of the flying hours of modern high-speed high-output aircraft engines to the maximum period between complete overhauls, is intimately related to cylinder barrel wear. To study the factors affecting wear so as to accomplish increased engine life, a series of tests were run on 12 420-horsepower nine-cylinder aircooled engines using 80 octane leaded fuels—six new engines, one engine with rebored barrels, one engine with new barrels, three used engines and one engine with both new and used cylinders. Each plane was twin engined and the engines were designated by plane number and whether left (L) or right (R) mounted. Test flights were conducted over regularly scheduled air routes with cruising speeds well over 200 miles per hour. The total flight hours for each engine varied from 350 to 418 hours. The engine lubricating oils under test were drained at approximately 50-hour periods and fresh oil of the same make put in, until each engine had 350 or more hours. Then the engines were taken down for checking and inspection.

By referring to Figure 3 the cylinder wear is 0.001 inch for 50,000,000 revolutions can be compared for the six different oils. The total wear varies as much as 800 per cent. However, when engines are compared using the same oil, such as oil "A," the variation is approximately 200 per cent, considering the same No. 1 plane and new engines in each case. When the ratio of oil "A" is checked on the basis of rebored barrels, plane 4 left engine, the difference is 316 per cent greater than the new engine wear. The used engine test showed 660 per cent more wear than plane 1 left engine. In all new engines, cylinders Nos. 1, 7, 8 and 9 showed considerably more wear than cylinders Nos. 4 and 5.

When the ring sticking tendencies were compared, using the No. 2 ring of each cylinder, it was found that on the engine, plane 1-L, with the lowest total wear and the lowest wear ratio, three No. 2 rings were in excellent condition, five good and one fair, whereas the next lowest wear ratio, plane 2-L, showed all rings free. However, engine 2-R had all rings free but developed slightly more wear than engine 3-R with four No. 2 rings sluggish. The No. 7 cylinders showed more ring sticking tendencies and the No. 4 cylinders most free. Reconditioned or used engines indicated greater ring

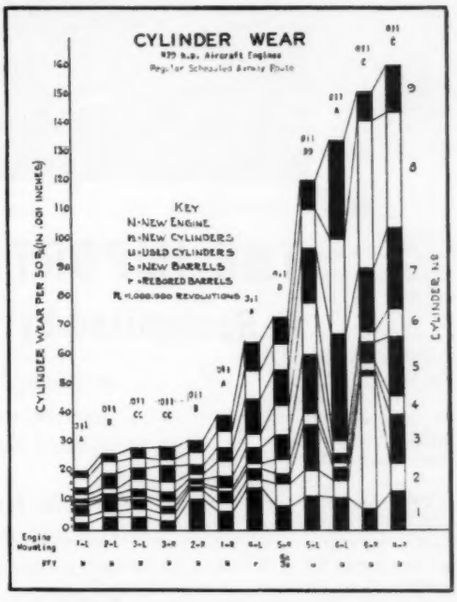

Fig. 3—Plot showing cylinder wear with six different oils tested in aircraft engines

sticking than new engines. Low oil consumption seemed to be related to freedom of ring sticking.

The variables that were present in these flight tests consisted of those related to pilots, to engines, new, used or reconditioned, to air fuel mixtures and head temperatures and to different aircraft lubricating oils. Laboratory equipment for studying the ring wear in aircraft cylinders was designed. Two standard aircraft pistons connected back to back so as to carry a balanced pressure of gas between to simulate the mean effective pressure—185 pounds per square inch—of aircraft engine. By this setup ring wear can be studied under varying heat temperatures and speeds and for different metals and engine conditions.

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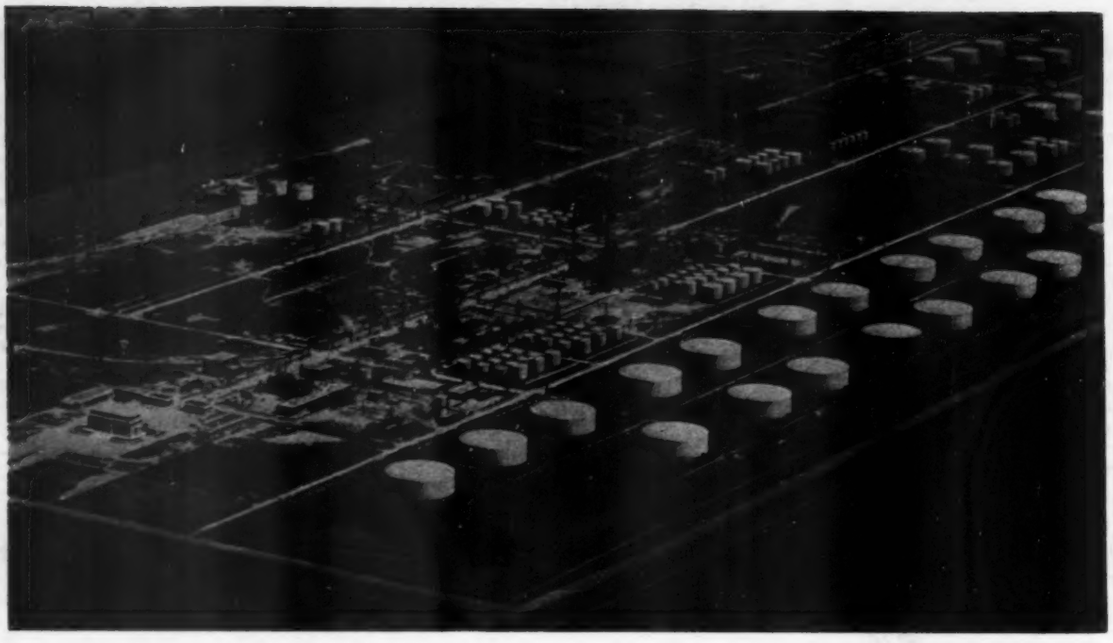

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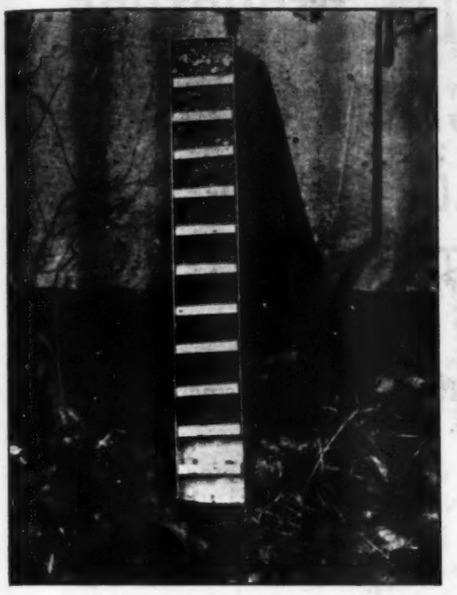
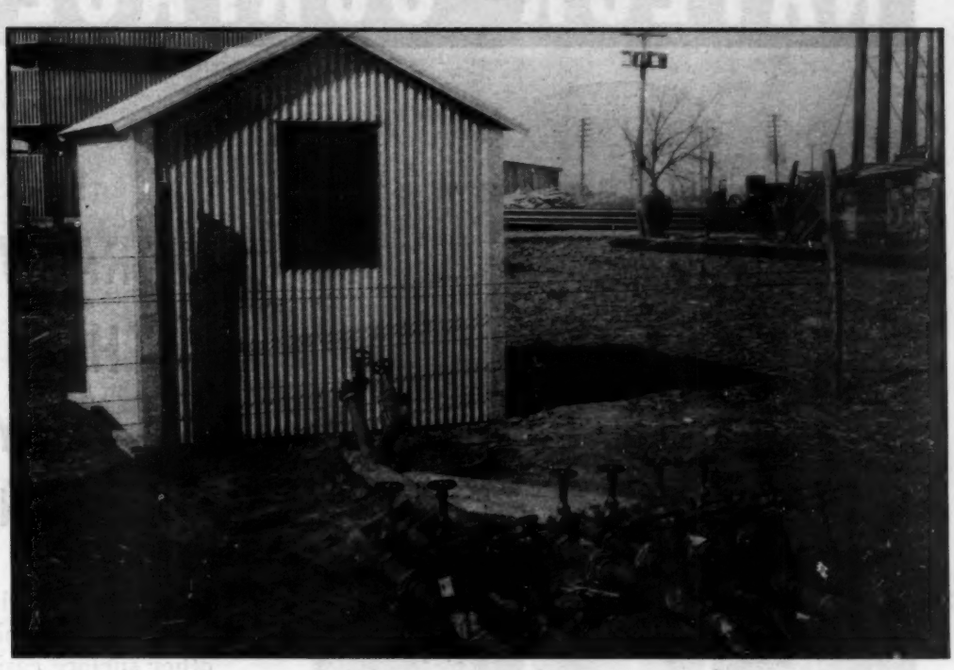


on lip of partition between compartments. Usual practice is to take samples after running each screw or about every five feet.



Header for Distributing Chemicals Fighting Fires

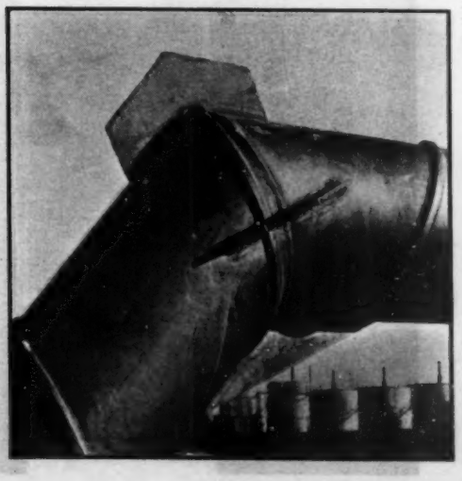
The accompanying photograph shows a header used by one operator in the Oklahoma City field as a means of protection against excessive loss in case of a fire in any tank of a battery of six. The small galvanized iron building houses a jetting funnel into which is dumped fire fighting chemicals which are in turn forced into the header system shown in the foreground by a stream of water under high pressure and velocity. Each of the six lines shown in the foreground are connected to a lease stock tank and by means of the valves shown the stream of chemical may be directed to any tank desired.

Steam Exhaust Muffler for Town Lot Drilling

In town lot drilling, contractors are usually confronted with city ordinances prohibiting the use of open steam exhausts from engines or pumps. The accompanying picture shows a muffler constructed of 12½-inch casing as the outside jacket and using 6⅝-inch casing for the exhaust pipe, it being slotted inside the larger pipe. This eliminates about 75% of the noise and is so located that water produced by condensation of steam is drained into mud pits.

Weld at River Crossing

To provide reinforcement for a 45 degree weld on a large gas line at a river crossing the operator has welded pieces of 3/8-inch steel plating as shown in the photograph. This line is suspended across the river by suspension cables 1-inch diameter and is also supported on each river bank by supports made of heavy pipe, to which the cables are fastened. The steel fins shown at the weld take a portion of the strain imposed upon the weld.



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View of a 125-horsepower, 300-pound w.s.p. superheater boiler installation equipped with lightweight Venturi stacks

Progress in Steam Drilling Equipment Is Indicated by Higher Efficiencies

By V. WEAVER SMITH
Vice President, The Broderick Co.

Steam is the ideal power medium for oil well drilling. No other medium provides the flexibility of operation as well as steam. With steam it is possible to have power both at high speed and low speed. It is easy to reverse the drilling machinery without delay or mechanical difficulties.

Steam power grew up in the drilling industry in the days of plenty. During its early development first cost or long life was of little importance. There was no need of economy in fuel because there was plenty available and no matter what the cost of drilling the returns were correspondingly large. As a result of this drillers learned to use steam inefficiently and paid little attention to improvements in equipment.

But economic changes have come about in the production of oil. More attention must be paid to refinements of equipment and efficiency if the driller is to retain his ideal power. No longer is it economic to use large quantities of fuel and water. The driller finds that higher first cost of equipment and more attention to its operation to preserve its life and to decrease its operating costs are now important.

Drilling operations are such as to make it difficult to get actual test data. As a result very few facts are known about the power requirements of drilling operations. Likewise wide variations of conditions exist in different oil fields and formations.

However, some valuable data has been secured and it is well for the industry to examine this information as it can be helpful in solving some of the economic problems. With the advent of deeper drilling in 1928 and 1929, one of the large oil companies,[1] in conjunction with several of the equipment manufacturers conducted extensive tests in the Humble field in Texas to determine the advantages of superheated steam. Later the special research committee of the American Society of Mechanical Engineers, under the direction of W. H. Carson, director of the School of Mechanical Engineering of the University of Oklahoma, conducted exhaustive tests on drilling in Oklahoma City.[2] In the past few months careful tests[3] on some of the most modern steam power equipment has been made at Chandler, Okla.

The results of these tests are summarized in Table 1. The data is of great importance because it shows the improvement in efficiency that has taken place in the period 1929 to 1935. It is also important because it shows the requirement of power, fuel and water for a wide range of drilling conditions. The tests conducted at Oklahoma City were the most exhaustive. They show the difference in fuel and water requirements for both 6⅝-inch and 4½-inch drill pipe in the same formations using saturated steam with the equipment available at that time.

V. WEAVER SMITH

At a joint meeting of the Mid-Continent Sections of the A. S. M. E. and A. I. M. E., this paper on modern steam drilling equipment was presented covering one phase of the general subject of "Power for Rotary Drilling". It outlines the many improvements in the past few years and indicates the trend.

The tests in the Humble field are particularly interesting because they show the decided advantage of high degree superheated steam over saturated steam. This test shows a decrease of 11.5 per cent in water required and 14.3 per cent in fuel required. This does not tell the whole story, however, since no restraint was put on the mud pump or engine and it was found that with the savings of fuel there was also an increase of 16.3 per cent more work done resulting in an actual saving of 23.9 per cent in water and 26.3 per cent in fuel.

The test at Chandler, Okla., shows the marked improvement that can be gotten when better feed water heaters, engine driven power pumps and improved drilling engines are used in conjunction with a moderate degree of superheat and insulation of boiler and steam lines.

Complete data is not available on all the tests so that it is necessary to make estimates by comparison on some of the tests. At Oklahoma City the daily average requirements and the power demand requirements were established. Both of these factors are of extreme importance. The daily averages show the amount of fuel and water required while the power demand shows the size of equipment that is needed to run the rig. Perhaps it will be clearer what the difference is when it is remembered that no rig runs continuously for 24 hours per day: consequently the power required when drilling will be higher than the daily average. The power demand figures given on the Oklahoma City test were determined from the indicated horsepower requirements of the pump and engine when drilling, plus the average daily requirements of the accessories, such as the feed water pump, turbo generators, etc. The figures given are probably low because the accessory figures are only average. The steam requirements in Table 1 used for the pump and engine are the highest determined during the period of drilling. It is to be borne in mind there is a depth of hole that has the highest power demand. This is not necessarily the greatest depth of the hole. So far it has not been possible to get sufficient data to determine

Operating Data and Results of Test on 125 H. P. 300 lbs. W. P. Superheater Boiler

GENERAL INFORMATION

1. Date of Test		Dec. 30 & 31, 1931
2. Location of Plant		Muncie, Indiana
3. Owner of Plant		The Research Company
4. Maker & Type of Boiler		Broderick Oil Country Type
5. Maker & Type of Superheater		The Superheater Co. Type "A"
10. Maker & Type of Fuel Burning Equipment		The National Supply Co. Dorsey Type "J"
11. Test conducted by		The Broderick Co. & The Superheater Co.
12. Object of Test		Operating Data

DESCRIPTION, DIMENSIONS, ETC.

13. Boiler Heating Surface	A.S.M.E.	1094.3 sq.ft.
14. Superheater Surface	A.S.M.E.	234.09 "
15. Total Steam Generating Unit Surface	A.S.M.E.	1094.3 "
20. Number of Burners		2
21. Method of Producing Draft		Natural & Induced
22. Fuel		Natural Gas
23. Area of Furnace Floor	side deep	32-1/4"wide-5/32"-22.76 "
25. Furnace Volume per sq.ft.boiler heating surface		.1388 cu.ft.

FUEL ANALYSIS & COMBUSTION PRODUCTS

	Vol.	Wt.
26. Moisture	%	%
27. Carbon Dioxide, CO_2	2.3%	3.7%
28. Hydrogen, H_2	1.2%	.14%
29. Methane, CH_4	88.7%	82.5%
30. Acetylene, C_2H_2		
31. Ethylene, C_2H_4	1.3%	2.04%
32. Ethane, C_2H_6		
33. Hydrogen Sulphide, H_2S	0.8%	0.8%
34. Oxygen, O_2	.9%	1.67%
35. Nitrogen, N_2	4.4%	7.13%
36. Carbon Monoxide, CO	1.1%	2.01%
37. B.T.U. per cu.ft. S.C. DRY	990	986
38. B.T.U. per lb. WET	21,475	21,475
39. Wt. per cu.ft. S.C. lb.	.04586	.04586
39a. Wt. total Hydrogen per lb. of fuel lb.	.20814	.20814
39b. Wt. carbon per lb. fuel	.66235	.66235
S.C. - Standard conditions	32° F.	60° F.
41. Gas analysis, Boiler outlet:-		
CO_2	9.4%	10.3%
O_2	4.3%	1.0%
CO	0.0%	0.0%
N_2	86.4%	87.7%
CH_4		
44. Flue gas per lb. fuel, furnace		
47. Flue gas per lb. fuel, boiler outlet. lb.	19.19	17.48
48. Flue gas per lb. fuel, " Theoretical lb.	15.65	15.65
49. Air supplied per lb. fuel, furnace lb.	18.19	16.48
49a. Air supplied, Theoretical lb.	14.63	14.63

PRESSURE AND DRAFTS.

51. Steam pressure by gauge, boiler	294	297	288	lb.per sq.in.
52. Steam pressure by gauge, superheater	292.5	295	285	lb.per sq.in.
55. Pressure of fuel at burners	20.0	20.0	20	oz.per sq.in.
57. Draft in furnace	.13	.12	.07	in.of water
58. Draft at boiler outlet	.23	.255	1.25	in.of water

TEMPERATURES

61. Steam temperature at superheater outlet	550°	661°	469° F.
62. Moisture in steam entering superheater	4.77%	3.77%	3.2%
63. Superheat	176°	340.4°	347.91° F.
66. Temperature of Air surrounding boiler(t1)	40.4°	39.0°	34.25° F.
69. Temperature of air for combustion (t4)	40.4°	39.0°	34.25° F.
70. Temperature of furnace (t5) entering flues	1390°	1450°	1730° F.
71. Temperature of gases leaving boiler (t6)	618°	747°	853° F.
74. Temp.of feedwater entering boiler (t9)	44.5°	43.0°	42° F.
77. Temp. of fuel at burner (t12)	44.0°	42.5°	39° F.

HOURLY QUANTITIES

78. Duration of test	4	4	4	hr.
79. Fuel gas per hr. as fired at 0 cu.	6097.48	11915	19833	cu.ft.
80. Fuel gas per hr. corrected std.conditions	5748	12371	19053	cu.ft.
81. Fuel gas per burner, per hour	2908.48	283.19	4954.73	lb.
81a. " " total " "	388.48	566.37	981.47	lb.
82. " " per cu.ft.of furnace volume per hour	1.394	2.71	5.92	lb.
83. Actual water per hour	1327.96	6300.8	9250.0	lb.

HEAT QUANTITIES - BTU per lb.

Heat absorbed by:			
86. Water and steam in boiler	1151.51	1159.56	1145.85 BTU
87. Steam in superheater	160.05	186.39	182.93 BTU

HOURLY QUANTITIES - Kb per hr.

Rate of heat absorption in:				
90. Boiler	3825.0	7186.6	10740.0	Kb
91. Superheater	532.5	1157.0	1683.0	Kb
Total rate of heat absorption:				
93. By steam-generating unit	4347.5	8337	12443	Kb
Kb = 1000 BTU				
Rate of heat absorption:-				
94. per lb. fuel	14.625	14.709	13.825	Kb
95. per cu.ft. fuel,standard conditions	.7120	.674	.633	Kb
97. Efficiency of steam generating unit	67.7%	68.6%	64.5%	

HEAT BALANCE

	BTU per lb.fuel	BTU per lb.fuel	BTU per lb.fuel
1098. Heating value of fuel	21582-100%	21480 - 100%	21475 - 100%
Heat absorbed by:-			
1100. Water & Steam in Boiler	12820-59.59%	12900 - 59.98%	11930 - 55.60%
1101. Steam in superheater	1784 - 8.28%	2075 - 9.66%	1871 - 8.72%
1102a. Steam generating unit	14600 -67.77%	14770 - 68.64%	13800 - 64.32%
Heat losses:-			
1104. Water from combustion of hydrog.	1913 - 9.04%	1938 - 9.38%	1966 - 9.12%
1106. Total flue gas	3888 -13.36%	3358 - 15.61%	3740 - 17.58%
1107. Incomplete combustion of carbon	43.1 - .20%	8.5 - .03%	275 - 1.28%
1108. Unaccounted hydrogen and hydrocarbons, radiation, and unaccounted for	2865 - 9.60%	1419 - 6.60%	1670 - 7.78%

Relation of Steam Generation to Heating Surface and Weight 200% Rating 125 H. P.—300 lbs. Pressure Superheater Boiler

DISTRIBUTION OF HEAT	B.T.U. PER HOUR	WITHOUT SUPERHEATER POUNDS OF STEAM	PER CENT OF TOTAL	SQ.FT. H/HP	WITH SUPERHEATER POUNDS of STEAM	PER CENT OF TOTAL	SQ.FT. HS/HP	SQ. FT. OF HEATING SURFACE	PER CENT OF TOTAL	WEIGHT IN POUNDS	PER CENT OF TOTAL WEIGHT
Total BTU to Firebox	12,165,628										
Less due to Hydrogen	1,104,655										
Less due to Incomp. Combustion	3,481										
Total BTU available in Firebox	11,055,292										
BTU entering Flues	4,589,296										
Absorbed in firebox	6,465,996										
Firebox Radiation	403,500										
Absorbed by Water	6,062,496	5230.0	72.5	0.86	5230.0	84.1	0.86	129.7	11.8	16691	52.6
BTU left at 1 ft. from Fire Sheet	4,922,172										
BTU available in 1st. ft. of Flues	587,124										
Radiation in 1st.ft.	68,800										
BTU absorbed by Water & Superheater	518,324										
BTU absorbed by Superheater	272,000	464.0			230.0						
BTU absorbed by Water	246,324	5694.0	79.0	5.1	5460.0	88.0	10.3	198.6	18.2	17766	56.0
BTU absorbed by	1,573,720										
2nd. ft. of Flues	448,000										
	28,800										
	419,552										
	212,560	362.6			198.6						
	207,152	6056.0	84.2	6.5	5658.6	90.7	13.3	267.5	24.4	18841	59.4
3rd. ft. of Flues	1,365,000										
	268,720										
	28,800										
	179,920										
	90,800	155.1			76.7						
	89,020	6211.1	86.3	15.3	5715.3	92.0	31.0	336.5	30.8	19916	62.8
4th. ft. of Flues	1,166,666										
	198,134										
	28,800										
	169,534										
	95,800	146.2			74.						
	93,634	6357.3	88.3	16.2	5789.3	93.1	32.1	405.4	37.1	20991	66.2
5th. ft of Flues	2,977,584										
	191,082										
	28,800										
	162,282										
	90,000	140.8			69.2						
	90,282	6497.3	90.0	17.0	5858.5	94.3	34.3	474.3	43.2	22066	69.6
6th. ft. of Flues	2,790,000										
	184,584										
	28,800										
	154,784										
	79,200	135.0			66.9						
	77,584	6632.3	92.0	17.6	5925.4	95.4	35.5	543.2	49.6	23141	73.0
7th. ft. of Flues	2,625,000										
	185,000										
	28,800										
	156,200										
	88,800	117.5			58						
	67,400	6749.8	93.7	18.2	5983.4	96.4	41.0	612.0	56.0	24216	76.5
8th. ft. of Flues	2,485,000										
	140,000										
	28,800										
	111,200										
	56,400	96.0			47.2						
	54,800	6845.8	94.8	24.9	6030.6	97.0	50.3	681.0	62.2	25291	79.7
9th. ft. of Flues	2,350,000										
	139,000										
	28,800										
	106,200										
	53,750	91.7			45.2						
	52,450	6937.5	96.2	25.9	6075.8	97.8	52.5	749.9	68.5	26366	83.1
10th. ft. of Flues	2,220,000										
	139,000										
	28,800										
	101,200										
	51,250	87.4			43.1						
	49,950	7024.9	97.5	27.3	6118.9	98.5	55.1	818.9	74.8	27441	86.6
11th. ft. of Flues	2,121,000										
	73,000										
	28,800										
	70,200										
	35,500	60.5			29.9						
	34,700	7085.4	98.4	29.3	6148.8	98.9	79.2	887.8	81.1	28516	89.9
12th. ft. of Flues	2,011,000										
	69,000										
	28,800										
	41,200										
	21,000	52.8			26.1						
	20,200	7138.2	99.1	45.0	6174.9	99.4	91.0	956.7	87.4	29591	93.2
13th. ft. of Flues	1,963,000										
	69,000										
	28,800										
	40,200										
	20,450	34.7			17.8						
	19,750	7172.9	99.6	68.5	6191.1	99.7	138.0	1085.6	99.7	30666	96.7
14th. ft. of Flues	1,900,000										
	69,000										
	28,800										
	11,200										
	10,750	28.6			14.2						
	10,450	7201.5	100.	83.0	6206.3	100.0	187.0	1096.3	100.	31741	100.0
Totals for 14 ft. Flue Boiler		7201.5	100.0		6206.3	100.0		1096.3	100.0	31741	100.0
BTU absorbed by 15th. ft. of a 14 ft. flue Boiler	1,849,000	29.2									
	28,800										
	22,200	7230.7	100.2					1163.2		32816	103.5
BTU absorbed by 16th. ft. of a 16 ft. flue Boiler	1,816,000	1.9									
	28,800										
	2,200	7222.6	100.2					1232.0		33891	107.0
Totals for 16 ft. Flue Boiler		7222.6	100.2					1232.0		33891	107.0

this point because the amount of mud circulated and the speed of the engine enter into this determination.

The Oklahoma City test shows the great difference in power requirements between 6⅝-inch and 4½-inch drill pipe. Due consideration must be given to the speed of drilling in considering this difference. The data on the Oklahoma City test indicates that the power required for lifting drill pipe out of the hole down to a depth of 6,300 feet does not exceed the drilling demand. This is not shown in the data presented here.

A great deal of stress has been laid on the power requirements for lifting, but it is principally a question of how quick the driller feels he must get the drill pipe out of the hole. A little more time in lifting the first few stands will reduce the power demand considerably and would scarcely increase the total time of drilling. Hence it is quite possible that in deep drilling the lifting demand need never exceed the drilling demand. Little data is available at present on this point.

In the Humble field tests only the power demand was determined. The Oklahoma City test showed an increase of 23.5 per cent and 30 per cent increase power demand over the daily average. Hence a figure of 25 per cent was used to estimate the daily average of fuel and water on the Humble test. At Chandler only the daily average on fuel was taken and water and horsepower were estimated on a 55 per cent boiler efficiency basis. The demand figure was estimated at 25 per cent greater than the daily average.

It is of interest to compare the boiler plants used on these tests. At Oklahoma City four 250-pound pressure 125 horsepower small firebox boilers were used. The radiation load of four boilers has a great influence on the high fuel figures in spite of the moderate power required. It is safe to say that with modern boilers now available, fewer could have been used.

In the Humble test two saturated boilers 90 horsepower 200-pound pressure were used. The two superheater boilers were 65 horsepower 180-pound pressure but had a higher percentage of firebox surface and volume than the saturated boilers. Because of their small size the superheater boiler had to be operated at 228 per cent of rating while the saturated were operated at only 167 per cent of rating. The superheater boilers operating at a 61 per cent higher rating had an efficiency of 6.6 per cent higher than the saturated boilers. This indicates as will be shown later in this paper that superheater boilers will produce more volume of steam at an equal efficiency than a saturated boiler. It also indicates that a superheater boiler of the same size will provide the same amount of power at higher efficiency.

In the Chandler, Okla., test two modern 125 horsepower 250-pound pressure boilers were used. It was shown however, that one boiler was capable of running the rig except when there was excessive jetting of mud. This rig actually used two boilers over most of the drilling period so the fuel figures reflect radiation from two boilers instead of one which would have been able to supply the power demand. This rig did not have the benefit of all the most modern steam equipment. A separate direct connected rotary engine was not used. Had one boiler been used and the smaller engine with its better water rate and a higher degree of superheat been used, the fuel and water figures would be even better than actually obtained.

The study of the operating data of the tests indicate the great advance that has been made in the efficiency and size of the equipment necessary for drilling a 6,000-foot well. There are certain locations where fuel and water are still plentiful and are available at little or no cost. Consequently it is desirable to analyze the various combinations of equipment that can be used for a 6,000-foot well and discuss the advantages of each.

Table 2 gives the comparative costs and weights of four steam power plants that can be used. It is assumed in these set-ups that a modern feed water heater is used and that automatic firing home-made heaters that it is safe to say home-made water heaters have been tried with more or less success, but there is now available on the market heaters that are so far superior to the home-made heaters that it is safe to say home made heaters will soon be obsolete. Automatic firing and draft controls have so well demonstrated their worth that a rig without them is a rarity.

Set-up No. 1 consists of expanding engine drives on drawworks, rotary and mud pump, together with an integral superheater boiler fully insulated and with steam lines insulated. This plant will give the lowest fuel and water figures of the four suggestions at the lowest first cost and weight. In addition it will have the best operating characteristics because it provides high degree superheat giving peppy power at all times. When fuel and water costs are high this set-up of equipment will prove most economic.

Set-up No. 2 is similar to No. 1 except that it provides saturated boilers and a separately fired superheater. The efficiency will be slightly less than No. 1 set-up, because separately fired superheaters do not provide the high degree of superheat at a comparable price or weight. There is an initial higher cost of approximately $2,500.00. It does have the advantage of modernizing present saturated boiler equipment.

Set-up No. 3 consists of the non-expanding type drilling engine for combination drawworks and rotary drive and the duplex type slush pump. This equipment has been used extensively because of its reliability and simplicity. Included in this set-up are 85-horsepower integral superheater boilers. With the high degree of superheat available to absorb the uninsulated line losses and reduce the water rate on the steam cylinders, a remarkable reduction in fuel and water can be made.

In addition the capacity of the unit is increased. As pointed out from the result of the test on the Humble rig, these savings may reach 26 per cent. This set-up provides efficient equipment with low first cost and is desirable where the drilling rig may be used both at points of high and low cost fuel and water.

Set-up No. 4 is the simple power unit including nonexpanding engines and pumps with saturated boilers. It is to be noted these boilers are given as 275 pounds pressure while all the set-ups with superheater are shown as 250 pounds pressure. Experience has shown that the effective pressure in the steam cylinders with superheated steam will be 25 pounds or more, greater than with saturated steam. This is due to the lower pressure drop in the steam lines; the higher temperature of the steam cylinders, the small amount of steam to heat up the walls; and the smaller amount of steam required to fill the cylinder.

It would seem that the No. 4 set-up would be most desirable where fuel and water cost are negligible. However, closer examination indicates that the equipment in set-up No. 3 is considerably lighter in weight. This would reduce the moving costs and more than overcome the slightly higher first cost when considered over several years with 10 wells drilled per year. The boilers, because of their lighter weight, would be easier to handle. Experience has also proven that rigs provided with superheater steam are much more peppy and flexible. Hence, if we do not credit the rig with any fuel or water saving the advantage of superheat would appear to make set-up No. 3 more desirable than No. 4.

While there is not as much information available on deep drilling to 10,000 and 11,000 feet, it appears that the advantages of superheat and other modern equipment now available will hold true. In the Gulf Coast we see appearing rigs utilizing these modern improvements. In deep drilling the advantages should be even greater. For practically all of the modern equipment listed for 6,000 feet drilling will be no larger for 8,000 or 10,000 feet. Except for the addition of one or two superheater boilers or saturated boilers with a separately fired superheater, and larger pumps, the power equipment will remain the same. The same economies of operation will be maintained and the first cost and weight will be proportionately less.

If the horsepower demand in saturated steam

TABLE 1—COMPILATION OF TEST DATA ON STEAM POWER PLANTS FOR DRILLING OIL WELLS

	Oklahoma City field	Oklahoma City field	Humble field	Humble field	Chandler field
Location of well drilled					
Date of test	9—1930	9—1930	10—1929	10—1929	11—1935
Drill pipe size	6⅝"	4½"	6" & 4"	6" & 4"	4"
Depth at which data was taken	0'–5,570'	5,570' 6,329'	1,800' 4,000'	1,800' 4,000'	0'–5,025'
Daily average water used for power, barrels one day	1,202	912	497*	446*	359*
Daily avenge gas used for power, cubic feet one day	629,000	425,000	269,124*	230,612*	192,500
B.T.U. 1 cubic foot	1,217	1,217	1,400	1,400	1,175
Daily average gas used, 1,000 B.T.U. 1 cubic foot equivalent	765,493	529,395	376,926*	322,857*	226,187
Average boiler HP/hour	502	341	246*	238*	152*
Boiler efficiency, per cent	54.4	52.0	52.5	59.4	55.0*
Boiler horsepower demand one hour	610	443	308	297†	190*
Increase of demand over average horsepower	23.5	30.0	25.0*	25.0*	25.0*
Duration of test—days	30	10	18	18	30

* Estimated. † Doing 16.3 per cent more work than saturated boiler test.

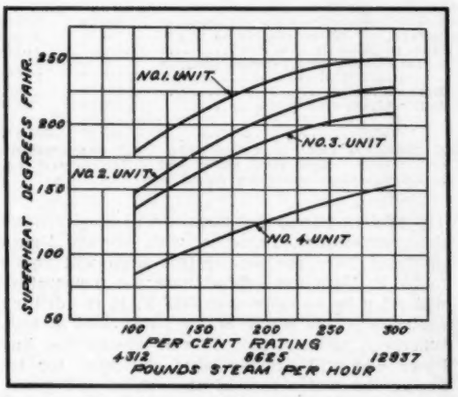


Fig. 2—Superheater with various length units

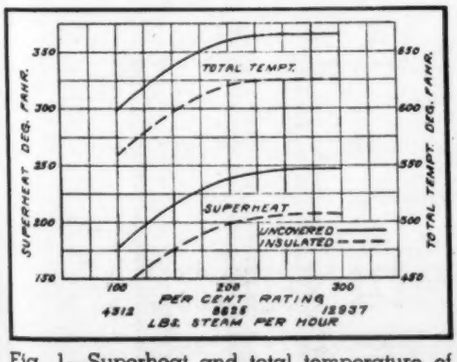


Fig. 1—Superheat and total temperature of Broderick 125-H.P., 300-lb. superheater boiler

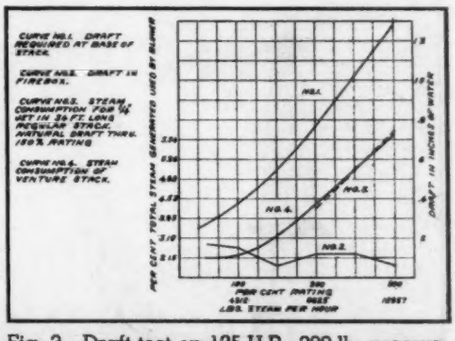

CURVE NO.1. DRAFT REQUIRED AT BASE OF STACK.
CURVE NO.5. DRAFT IN FIREBOX.
CURVE NO.6. STEAM CONSUMPTION FOR ¼" JET IN 36 FT. LONG REVELAP STACK. NATURAL DRAFT THRU. 150% RATING
CURVE NO.4. STEAM CONSUMPTION OF VENTURE STACK.
NO.1.
NO.5.
NO.4.
NO.2.
PER CENT TOTAL STEAM GENERATED USED BY BURNER
DRAFT IN INCHES OF WATER
PER CENT RATING
LBS. STEAM PER HOUR

Fig. 3—Draft test on 125-H.P., 300-lb. pressure Broderick superheater boiler fired with Doreco burners—1,000 B.t.u. gas

is known for any rig the number of boilers required can be determined. Manufacturers recommend that sufficient boilers be selected to take care of the normal power demand when operating the boilers at 200 per cent of rating. They are most efficient at this rating. Tests have shown they can be operated above 300 per cent if properly fired, and this reserve provides sufficient power for any emergency or peak power demand. If boilers with integral superheaters are used the horsepower demand should be reduced 25 per cent before selecting the number of boilers. If the boilers are covered with insulation, the horsepower demand can be reduced a further 7½ to 10 per cent before selecting the number of boilers.

The statement has been made many times by users of steam power that per dollar invested in equipment to bring about economy in steam power plants a superheater nets the largest return. This is particularly true on a portable steam power plant, because it reduces the weight of all the power equipment.

The theory of economy of superheat is not complicated and can be best understood by saying that superheated steam provides a larger volume of steam with less fuel than saturated steam does. This makes it a more efficient power medium.

The life of integral superheaters and their simplicity of operation has now been definitely established so that no one needs to hesitate in taking advantage of the better performance of superheaters. A great number of units have been in use for over five years without any mechanical or operating difficulties. The replacement of heating elements in five years service has been less than one-fourth of 1 per cent. Many of these boilers have been used to drill 40 or more wells. Many of the boilers have been retubed four or five times without replacement of the superheater elements. This is a remarkable record.

There has been only one complaint on the operation of equipment using high degree superheat, and this is a good deal like the story of the cobbler's son going without shoes. Drillers have been so accustomed to going without lubrication of the steam cylinders when using saturated steam that occasionally they have had trouble with cylinders and valves. For an oil company, or any one making his living from the oil industry not to demand the proper use of oil products on his equipment is as bad as urging your customers to buy your competitor's products.

The pump and engine equipment that has been manufactured in recent years will not experience any difficulty due to temperature. The maximum superheat obtainable at 300 pounds pressure with integral superheaters at the present time is 675° F.

TABLE 2—COMPARATIVE COST AND WEIGHTS, STEAM POWER UNITS FOR DRILLING 6,000-FOOT WELLS

Set-up No. 1—	Cost	Weight
Unitized direct engine drive rotary with 7⅞ x 7 vertical engine	6,981.00	20,175
Mud pump 7½ x 18 unitized with 7⅞ x 7 vertical engine	9,433.00	36,000
Drawworks engine 12 x 12 with cut-off single drive		
1—125 horsepower 250-pound superheater boiler	4,658.00	31,990
Insulation for boiler and line	400.00	4,000
Boiler piping and valves	200.00	1,000
Burners	260.00	1,000
Total	25,732.00	110,365
Set-up No. 2—		
Unitized direct engine drive rotary with 7¾ x 7 vertical engine	6,981.00	20,175
Mud pump 7¼ x 18 unitized with 7⅝ x 7 vertical engine	9,433.00	36,000
Drawworks engine 12 x 12 with cut-off	3,800.00	16,200
Portable superheater	3,447.00	12,000
1—125 horsepower 250-pound saturated boiler	3,491.00	28,150
Insulation for boiler and line	400.00	4,000
Boiler piping and valves	400.00	2,000
Burners	260.00	1,000
Total	28,212.00	119,525
Set-up No. 3—		
Rotary table with chain and sprocket	4,089.00	10,635
Rotary and drawworks engine 12 x 12	2,708.00	14,000
Mud pump—14½ x 7⅛ x 18	2,520.00	17,170
2—85 horsepower 250-pound pressure superheater boilers	7,518.00	51,770
Burners	520.00	2,000
Boiler piping and valves	400.00	2,000
Total	17,755.00	97,575
Set-up No. 4—		
Rotary table with chain and sprocket	3,989.00	10,635
Rotary and drawworks engine 12 x 12	2,708.00	14,000
Mud pump—14½ x 7⅛ x 18	2,520.00	17,170
2—100 horsepower 275-pound pressure saturated boilers	6,338.00	55,800
Burners	520.00	2,000
Boiler piping and valves	400.00	2,000
Total	16,475.00	101,605

Based on costs at Tulsa, Okla. Feed water heaters and pumps, spare mud pump and firing control not included because necessary on all rigs.

The modern pumps and engines will readily stand this temperature. However, with average length insulated lines the temperature drop will be 50 to 75° F. With uninsulated lines the temperature will often be no more than 500° F. at the drilling equipment. This is one of the advantages of high superheat, namely that it will absorb the line losses and still provide some superheat for reducing the water rate of the engine and pump.

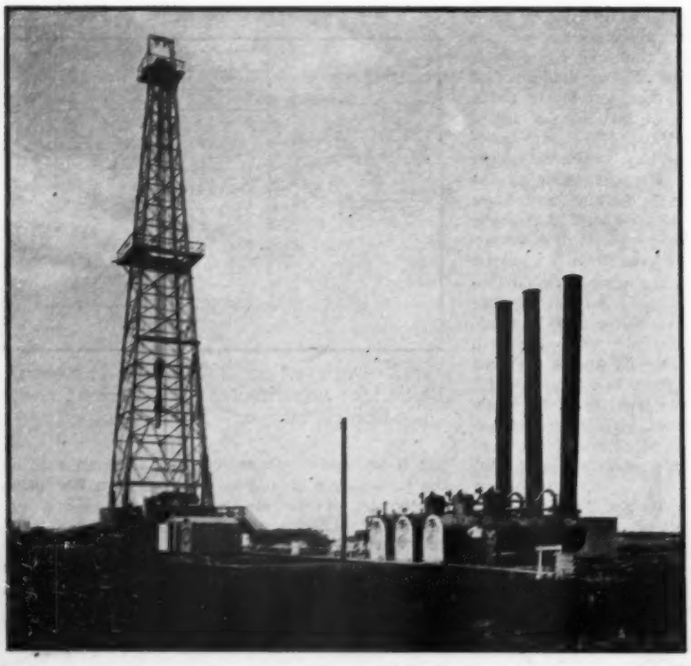
The total temperature and superheat available with standard units is shown in Figure 1. However, where it is desirable to use less superheat shorter units can be installed in the boilers to provide any degree of superheat desired, as is shown in Figure 2. The installation of heating elements is simple so that the change can be made at any time.

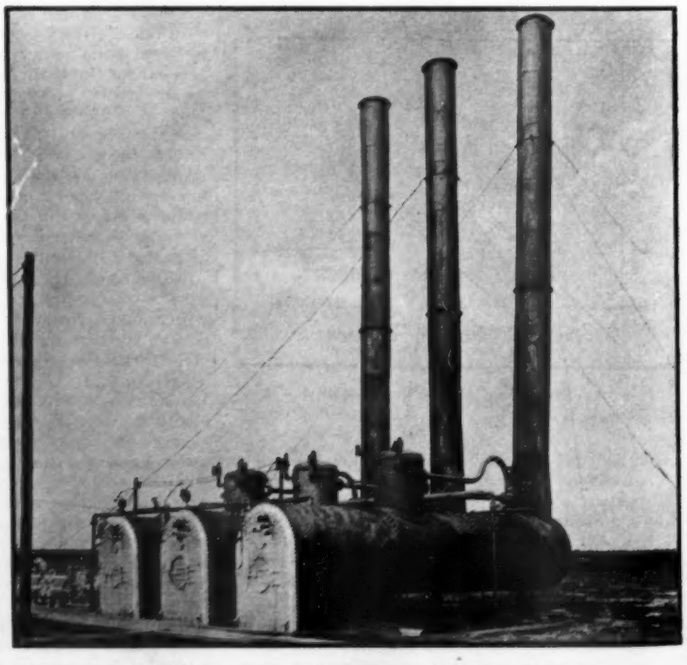
Separately fired superheaters are also available and have found a place in oil well drilling. Where modern saturated boilers are available the addition of a separately fired superheater to such a boiler plant will greatly improve its economy and increase the capacity. In locations where long steam lines are necessary and sufficient superheat cannot be provided at the boiler plant to overcome all line condensation and provide superheat for the rig, a separately fired unit can be installed at the rig to great advantage. The separately fired superheater makes it possible to control the temperature to any predetermined degree. However, controlling the degree of superheat closely is only important if temperatures approaching the safe working temperature of the materials used in the pumps and engines are used. The integral superheater variation of temperature will not exceed 75° F. over the working range of the boiler. The heating elements can be selected to give any desired superheat at the desired 200 per cent operating rating on the boiler, and as shown in Figures 1 and 2 this temperature will only be exceeded 10° or 15° F. at the highest rating of the boiler. At ratings below the normal demand some efficiency will be sacrificed. The capacity of the boiler plant however is not reduced by this variation at low ratings.

Integral superheaters are better protected from overheating. Separately fired superheaters require automatic controls for protection when there is no steam flow because all the heat of the fire is used for superheating. In the integral superheater over 50 per cent of the heat of the fire must first generate steam before passing over the superheater. If there is no steam flow the boiler pressure will rise and open the safety valve on the superheater outlet and provide flow of steam for protection.

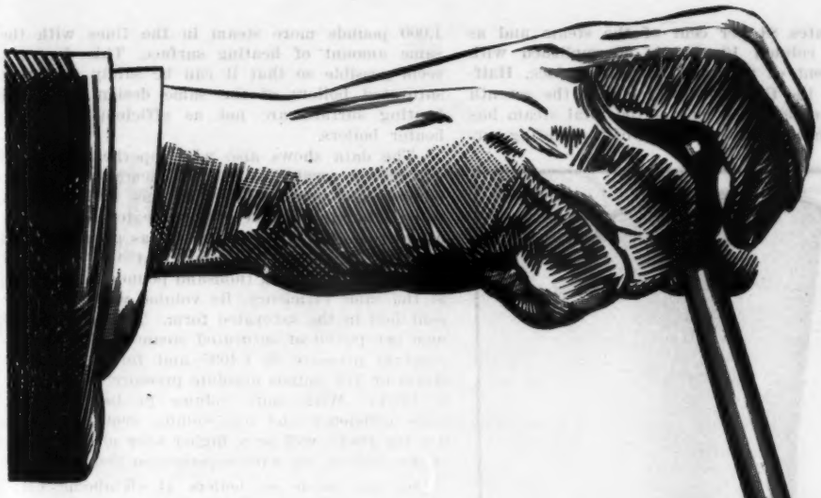
Even though the automatic control shuts off the fire on a separately fired superheater when there is no steam flow, often sufficient heat is left in the furnace walls to raise the temperature of the heating surface excessively. This shortens the life of the surface. The weight per unit of capacity of separately fired superheaters have been excessive. One of the equipment manufacturers will presently offer a separately fired superheater that will overcome these disadvantages of weight and short life of heating surface. With these improvements and a better understanding of steam power plant operating problems by the fireman, the separately fired superheater will give excellent results for moderate degree of superheat.

There is another point of interest to the oil





Two views of a 125-horsepower, 300-pound w.s.p. superheater boiler installation set up for operation in the field



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producing industry and the equipment manufacturers on which there has been little data available. When large steam demands become necessary for the faster and deeper drilling, the boiler manufacturers were faced with the problem of increasing the capacity of the boiler. It was essential to accomplish this without increasing the weight of the already too heavy boilers. Superheat was introduced, which was a big step forward.

One manufacturer in conducting tests on this type of equipment also found that the boiler itself could be improved. Two equipment builders cooperated in running extensive tests to be used as the basis of design of more efficient boilers.

After considerable study of design and information available a superheater boiler was built and extensive tests run. A great number of tests, holding the capacity of the boiler for four-hour periods, at rating of 50 to 300 per cent were made. Accurate records of fuel, water and temperature throughout the boiler were made. Draft readings in the firebox and stack were made. The composition and the heating value of the fuel were determined. The flue gas analysis was carefully determined.

Boilers have always been rated by the A.S.M.E. and A.P.I. codes on 10 square feet of heating surface irrespective of the arrangement of the heating surface in the boiler. These three tables show that the steam generating capacity of oil country boilers is far in excess of 10 square feet per horsepower. Heating surface varies from 0.8 of a square foot per horsepower to 167 square feet depending upon its location.

The heat available in the boiler in the flue gases for every foot of flue was calculated from the gas analysis and the flue gas temperature.

The total heat required to generate the steam and the heat required for superheating was determined from the quantity of water evaporated. The heat in flue gas leaving the boiler was known. From this it was possible to determine the radiation and unaccounted for losses. The flue gas analysis shows only a small amount of incomplete combustion at 200 and 300 per cent of rating. This heat and the hydrogen loss were deducted from the total heat available. The unaccounted for losses are thus reduced to radiation. The radiation from the boiler is in direct proportion to the outside surface. The radiation was distributed over the length of the boiler in this proportion. The firebox accounts for 50.2 per cent of the total radiation and each foot of flue for 3.59 per cent of the radiation.

Since the superheater is installed only in the flues the heat required for superheating was distributed in proportion to the heat available per foot of flue. This may not be entirely correct, because of the lower temperature difference between the steam and the flue gas. It is not felt

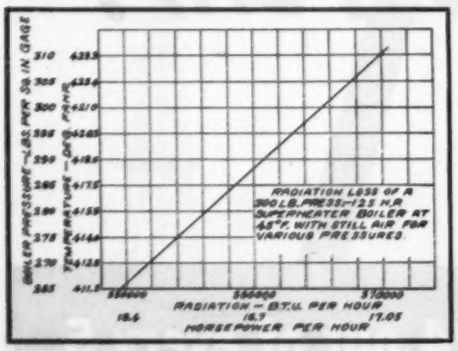
BOILER PRESSURE—LBS. PER SQ. IN. GAGE
RADIATION LOSS OF A 300 LB. PRESS.—12.5 H.P. SUPERHEATER BOILER AT 65°F. WITH STILL AIR FOR VARIOUS PRESSURES.
RADIATION — B.T.U. PER HOUR
HORSEPOWER PER HOUR

Fig. 5—Diagram showing loss by radiation of a 300-lb. pressure superheater boiler

that it will affect the results very greatly for it can be seen from the tables that only a small percentage of the total heat required is allotted to the last 5 feet of flues away from the firebox.

The results for 200 per cent of rating will be discussed for they are typical of all three ratings calculated and because this is close to the point of highest efficiency on the boiler.

It can be seen from the figures that the firebox generates 84 per cent of the steam and as shown in column 10 this is accomplished with 11.8 per cent of the total heating surface. Halfway down the flues or at the end of the seventh foot of flues 96.4 per cent of the total steam has been generated with 56 per cent of the heating surface. For the last 7 feet of flues the steam generating capacity drops off so rapidly that by the time the outlet of the flues are reached there is little more heat available than to take care of the radiation from that portion of the boiler. The fourteenth foot of flue generates 14.2 pounds of steam over and above its radiation.

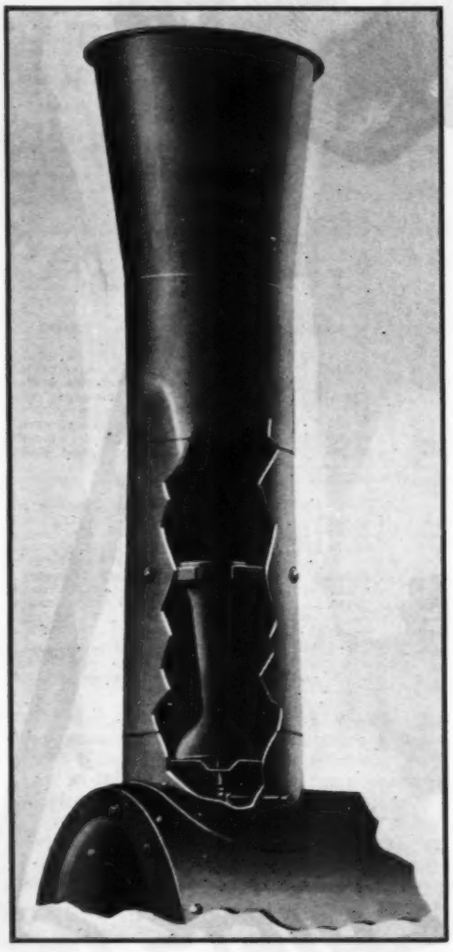

Fig. 4—Sectional view of Broderick patented Venturi stack

This boiler according to the A.S.M.E. rating would only be classed as a 109.4 horsepower boiler. By extending the flues 2 more feet and adding 7 per cent more weight it would be rated 123.2 horsepower. It would not generate any more steam but would radiate the equivalent of approximately 2 horsepower per hour in these 2 feet. These figures would indicate that a purchaser who insists on a full 1,250 square feet of heating surface with long flues keeps on paying for the boiler as long as he uses it. When a comparison of the weights are made it can be seen that he continues to pay greater trucking costs as long as he uses it.

Since the boiler tested was a superheater boiler it is interesting to compare it with results that might be expected from a saturated boiler. A saturated boiler with 98 flues 3 inches diameter and the same size firebox would have practically the same amount of heating surface per foot of length as this superheater boiler. It is to be noted that the superheater absorbs more than 50 per cent of the heat available in the flues. Consequently with the same amount of fuel fired or at the same efficiency the flues would have to absorb over twice the amount of heat they do at present. The firebox will not absorb more unless the fuel is increased. To operate at the same efficiency the boiler would have to generate 1,000 pounds more steam in the flues with the same amount of heating surface. This does not seem possible so that it can be safely said that saturated boilers of the same design and total heating surface are not as efficient as superheater boilers.

The data shows also why superheated boilers will give a greater over-all efficiency of the complete steam power plant. It has recently been stated[4] that the volume of superheated steam from a superheated boiler will not be as great as from a saturated boiler. Granting that the saturated boiler will generate a thousand pounds more steam at the same efficiency, its volume will be 16 per cent less in the saturated form. The specific volume per pound of saturated steam at 315 pounds absolute pressure is 1.4695 and for superheated steam at 315 pounds absolute pressure and 600° F. is 1.9014. With more volume produced at the same efficiency and less volume required in its use the result will be a higher over all efficiency of the drilling rig with superheated steam.

In tests made on boilers at Oklahoma City[4] with boilers operating on comparable rigs it was found that flue gas temperatures of saturated boilers were higher than superheater boilers. In generating the same amount of energy the flues of the saturated boiler have to do over twice the amount of work. This higher flue gas temperature has often been used as the basis of longer flues in boilers.

Very careful radiation data was taken and this data is reported in Figures 5 and 6. It is to be noted that these curves compare favorably with the unaccounted for losses gotten on the test. The curves are for still air and the tests were over four-hour periods with some wind always blowing. It is to be noted that the radiation can easily exceed these figures two or three times on windy or rainy days. This indicates the importance of covered boilers from a heat saving and increased capacity standpoint. If there was little heat loss, covering would probably justify itself by maintaining the shell temperature constant. The constant change in temperature and pressure on boilers has a great deal to do with leaks. It is apparent that radiation on the boiler does reduce the quantity of fuel required, but not the quantity of water.

The data compiled from the test shows that the efficiency is the highest close to 200 per cent of rating, and does not drop off appreciably at higher ratings. To secure high ratings on oil country boilers with natural draft would require stacks that are impractical to handle in the field. Consequently there has developed the practice of installing jets in the stacks to increase draft. A survey made of jets indicated that anything from a one-fourth inch diameter jet to a 1-inch pipe size jet was being used. Tests were conducted to

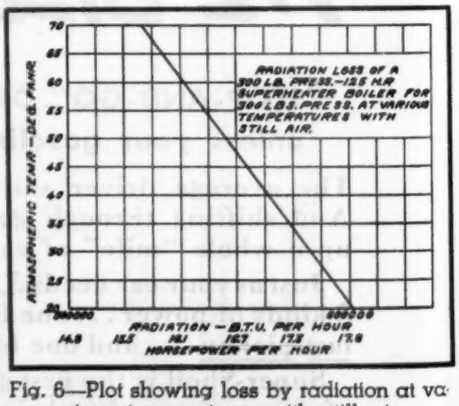
ATMOSPHERIC TEMP.—DEG. FAHR.
RADIATION LOSS OF A 300 LB. PRESS.—12.5 H.P. SUPERHEATER BOILER FOR 300 LB.S. PRESS. AT VARIOUS TEMPERATURES WITH STILL AIR.
RADIATION — B.T.U. PER HOUR
HORSEPOWER PER HOUR

Fig. 6—Plot showing loss by radiation at various temperatures with still air

determine the efficiency of these jets. It was found that a half-inch jet consumed as much as 25 per cent of the steam generated by the boiler. In other words, the jets of this size were simply biting the hand that fed them. Experiments were then conducted to design an economical jet to produce sufficient draft to operate the boiler. It was found on test that natural draft provided suffi-

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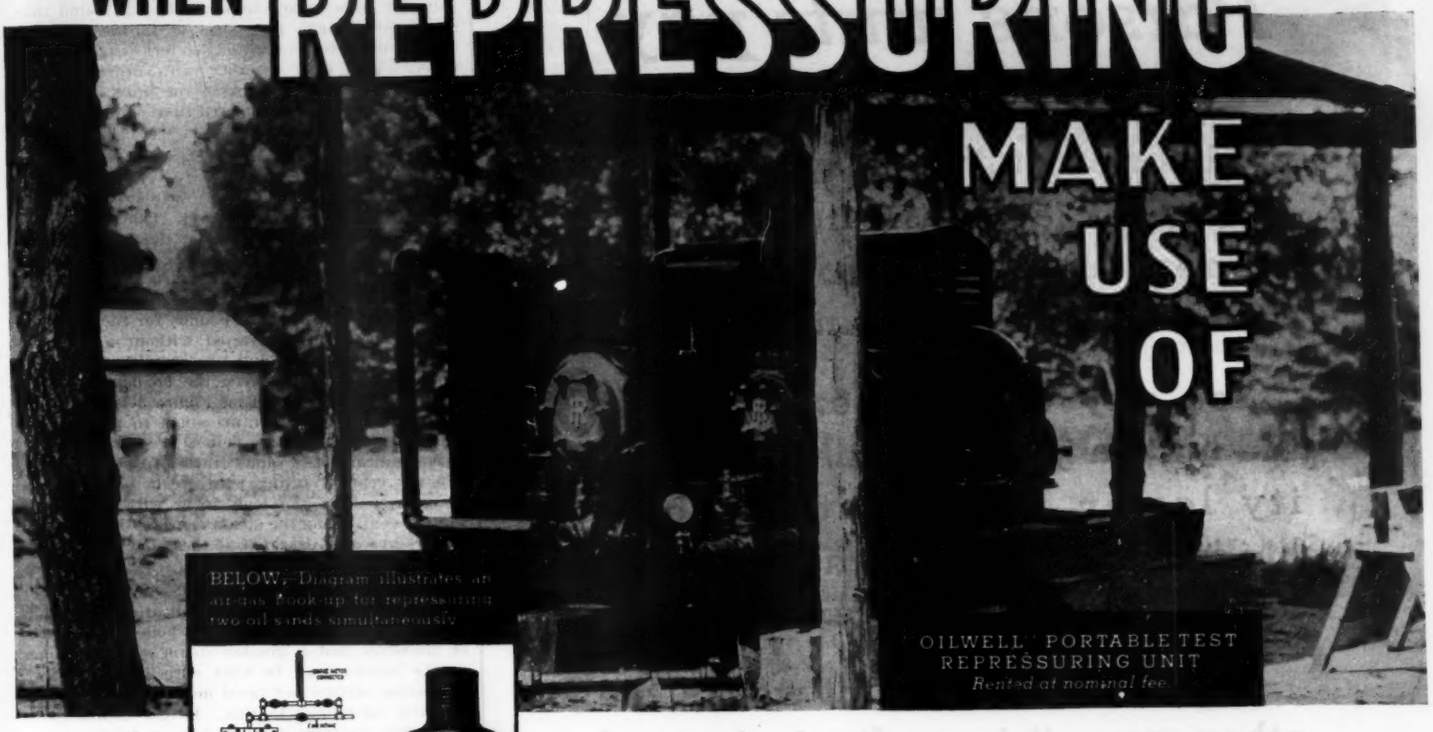

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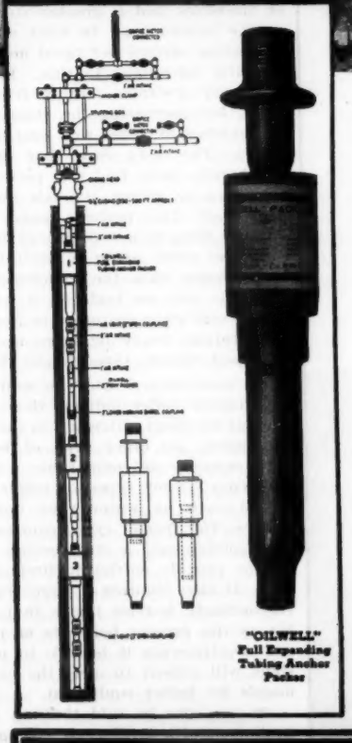

BELOW:—Diagram illustrates an air-gas hook-up for repressuring two oil sands simultaneously

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cient draft for tests run at 150 per cent of boiler rating. At 200 per cent there was not sufficient draft with the burners being used. Hence it can be said that this boiler can be operated at approximately 175 per cent of its rating with natural draft if the pressure drop across the burners is no greater than .08 of an inch of water and not over 25 per cent excess air is used. To secure the draft required for ratings above 175 per cent tests were conducted. It was found that a one-fourth inch pipe size jet in the standard 30-inch diameter stack and 34 feet long was sufficient. This data together with draft required in the firebox and at base of the stack are shown in Figure 3. It is to be noted that steam consumption does not exceed 5.7 per cent at 300 per cent of rating.

The standard long stacks are very cumbersome to handle. They require guy wires to keep the wind from blowing them over. They are easily damaged and cannot be kept tight readily. To overcome these advantages tests were conducted on short stacks. The Venturi stack shown in Figure 4 was developed. These stacks weigh 310 pounds compared to 1,360 pounds for the standard stack. They can be erected without a jin pole. They are all-welded, and are complete with bonnet, so that leaks between the bonnet and stack are eliminated. Curve 4 on Figure 3 is the steam consumption of the Venturi stack to produce the draft required by the boiler. A study of this curve indicates the same draft is provided above 175 per cent of rating with steam consumptions no greater than the long stack with jet. Below 175 per cent rating the steam consumption is small. Boilers are only operated at these low rates when the rig is not running at full capacity. Hence the capacity of the boiler is not reduced.

Recently there has been indications that the drilling industry would demand boilers with larger fireboxes and a greater steam space. So long as the boilers must be built with 10 square feet of heating surface per rated horsepower there will be little advantage in this. Larger steam space is a very desirable feature from a safety standpoint, but increasing the steam space cuts down the number of tubes that can be installed in the boiler. The tests show that the present firebox can handle more fuel and produce more flue gas than can be gotten through the flues with natural draft. This perhaps makes it clear why the area of flues in a superheater boiler do not have to be as great as in a saturated boiler. It has been shown that the efficiency of a saturated boiler is not as high as a superheater boiler. Lower efficiency means more flue gas at a higher temperature, requiring more area to handle this increased volume through the flues.

In conclusion it may be said the tests on the superheater boiler indicate the high capacity possible at excellent efficiency in the modern oil country boiler. No other type of boiler offers such high capacity at comparable weights or at such efficiency. Other types of boilers have been suggested such as water tube boilers and marine boilers. The former type requires a heavy refractory setting and a steel casing. The latter type cannot provide sufficient firebox volume of flue area. It also requires a larger diameter with correspondingly heavier plates in its shell. As capable as the present boiler is of meeting the modern requirements it is safe to predict better designs will appear to meet the ever increasing demands for better equipment.

It can also be said that all the steam power equipment of a drilling rig has made great strides in meeting the economic demands. With the equipment builders carefully studying the needs of the drilling industry and improving their equipment to meet the changing conditions, and with the drillers cooperating by training their crews to better understand the operation of more efficient equipment, the producing industry will retain its ideal steam power.

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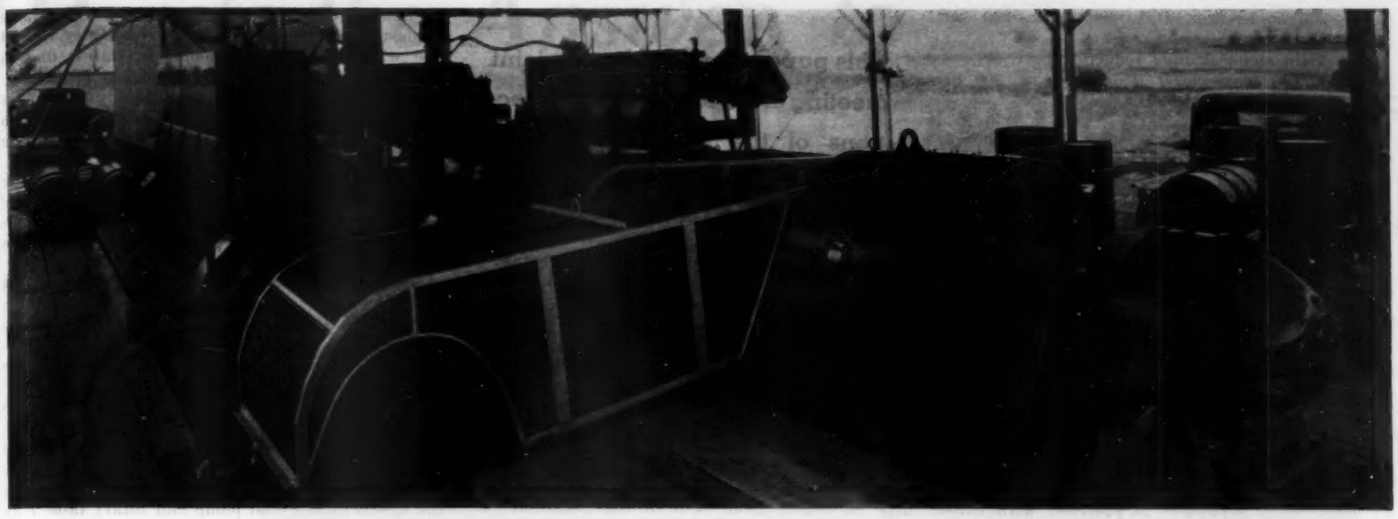
[1] "Use of Superheated Steam in Oil Well Drilling" by V. Weaver Smith. Transactions A.S.M.E., PME-52-3 Vol. 53 No. 11, pages 11 to 19.

[2] "Reports of Tests on Steam Equipment for Drilling Rotary Drilled Oil Wells", A.S.M.E. Research Publications, 1932.

[3] "Steam Conservation" by Warren L. Baker, Oil Weekly, Vol. 80 No. 6, pages 24 to 26.

[4] "Heat Conservation in Oil Well Drilling" by M. L. Phelps, Oil and Gas Journal, Vol. 34 No. 33.



General view of large direct current variable voltage generating plant furnishing power for a drilling unit

Engine-Electric Drilling Methods With Reference to Gas and Oil Power Units

By B. H. BERKELEY
Westinghouse Electric & Manufacturing Co.

Internal combustion engines are a very economical source of power for the rotary method of oil well drilling, particularly in isolated locations where the cost of transportation of fuel and water is a considerable item of expense.

To utilize this source of power to the best advantage, the direct current drilling rig was developed.

The first direct current variable voltage diesel electric rotary drilling rig was built for the Standard Oil Co. of California in 1927 by Westinghouse Electric & Manufacturing Co. This rig was operated in California at first, and later put in service in western Colorado and is now operating in the Hobbs field in New Mexico.

The system of control used is commonly called variable voltage, or Ward Leonard control which has been in use so long that the patent rights have expired. Variable voltage control is used practically on all electric shovels, stream line trains, steel mill drives, hoists, elevators, battleship drives, and hundreds of other applications where variable speed is required. All that this means is to vary the generated voltage. Since the speed of a direct current shunt motor varies directly with its input voltage, all that is necessary to get variable speed from zero speed to full speed is to vary the generator voltage from zero to full voltage.

The prime movers of these rigs can be electric motors where high line service is available and internal combustion engines if electric power is not available.

There are a number of gas-gasoline engine driven rigs operating on rotary drilling service now and have effected considerable savings over steam drilling equipment, especially on wildcat work.

In addition to the fuel and water savings, the weight of transporting such a rig is desirable. This type of rig operates at from 80 to 1,200 r.p.m. With the additional speed of these units their first cost is somewhat lower than the slower speed heavy constructed diesel. These engines are usually radiator and fan cooled and are direct connected to the generator. Each unit is mounted on a set of skids for portability.

These rigs are most all driven by four cycle type engines due to the lower fuel and lubricating oil consumption.

The diesel engines are of the slower speed class most of which operate from 500 to 600 r.p.m. The fuel consumption per 24-hour day on the large 700 horsepower rigs will not exceed 10 bbls. per day for normal drilling operation. In most cases this fuel may be purchased at locations for $1.75 to $2.00 per barrel. The lubricating consumption per day for the entire power plant will not exceed three gallons. In connection with the latest rigs there is used an enclosed cooling water system where the engine jacket water is cooled and prevents the deposit of lime in the cylinder and leads. There is but a few gallons evaporation of jacket water per day. The raw water which is circulated over the cooling section only will evaporate at about an average of 50 bbls. per day through all seasons of the year. One advantage gained with this system is the conservation of power which would be dissipated in the use of fans and radiation. Another being of course, the more effective cooling of jacket water.

B. H. BERKELEY

Most of the diesel electric rigs out are driven by two 350 horsepower 8 cylinders 9-inch bore by 12-inch stroke engines at 600 r.p.m. Each of these are mounted on individual skids, and through V-belt drives the generators.

Each engine is equipped with a clutch so that one engine may be shut down for repairs or light loads while the other engine drives the entire power plant. The engines are equipped with electric alarm to warn operator when water is too hot or lube oil pressure is low.

They are set up on each side of the generators and when setting up or tearing down all that is necessary to do to disconnect or connect is take off or put on the belts. When they are put in place the engines are moved outward from the generator assembly by jack screws that are installed on the subhills until the belts have the proper tension.

The engines are started by compressed air and a pressure of approximately 175 pounds is required. A small gasoline engine driven compressor is used for generating starting pressure in the air receivers. The other auxiliary equipment required is a motor driven wash down pump and raw water pump. All of this equipment may be mounted as a complete unit on separate skids.

1—250 K.W., D.C., 1,200 r.p.m., 200 volt generator.

1—200 K.W., D.C., 1,200 r.p.m., 200 volt generator.

2—20 K.W., D.C., 1,200 r.p.m., 115 volt direct connected exciters.

2—200 horsepower, D.C., 900 r.p.m., 200 volt shunt wound drilling motors.

1—Twin motor drilling reduction gear, or

1—200/400 horsepower, 450/900 r.p.m., 200/400 volt D.C. shunt wound drilling motor.

1—Single reduction gear.

1—300 horsepower, D.C., 900 r.p.m., 200 volt shunt wound mud pump motor.

1—200 horsepower, D.C., 900 r.p.m., 200 volt shunt wound mud pump motor.

1—Set of variable voltage control equipment.

1—Mud pump, 7¾-inch by 18-inch, or equivalent.

1—Mud pump, 7¼-inch by 14-inch, or equivalent.

1—5 horsepower, 1,750 r.p.m., 115 volt D.C. shunt wound motor, direct connected to centrifugal type circulating water pump.

1—5 horsepower, 3,450 r.p.m., 115 volt, D.C. shunt wound motor, direct connected to centrifugal type wash down pump.

1—Gasoline engine driven air compressor with storage tanks.

1—Portable unit type enclosed cooling system.

The two generators, V-belt drives, and two exciters are mounted on one continuous steel skid.

Each main generator is provided with three field windings.

(a) A separately excited shunt field, reversible in direction through the action of the master switch located by the driller on the derrick floor. This field determines the polarity, or direction in which the generator voltage will build up, and consequently the direction of rotation of the motor or motors connected to this generator.

(b) A self excited shunt field which builds in response to the generator voltage and is connected to add to the separately excited field.

(c) A differential series field, connected to oppose the two shunt fields.

This field is so proportioned that, when the generator armature and series field current increases to two times rated full load value, the series field is practicaly equal in strength to the combined shunt fields and the generator voltage is reduced almost to zero.

The exciters are flat compound wound to maintain essentially constant voltage from no load to full load eliminating a voltage regulator.

The two generators have shaft extensions for mounting of a V-belt sheave on each for connecting each generator to each engine.

The two generators are connected together through a detachable flexible coupling which may be closed or opened at will by removing two set screws.

The function of this coupling is as follows:

1—Coupling is closed when only one engine is operating.

2—Coupling is opened when one generator is operating.

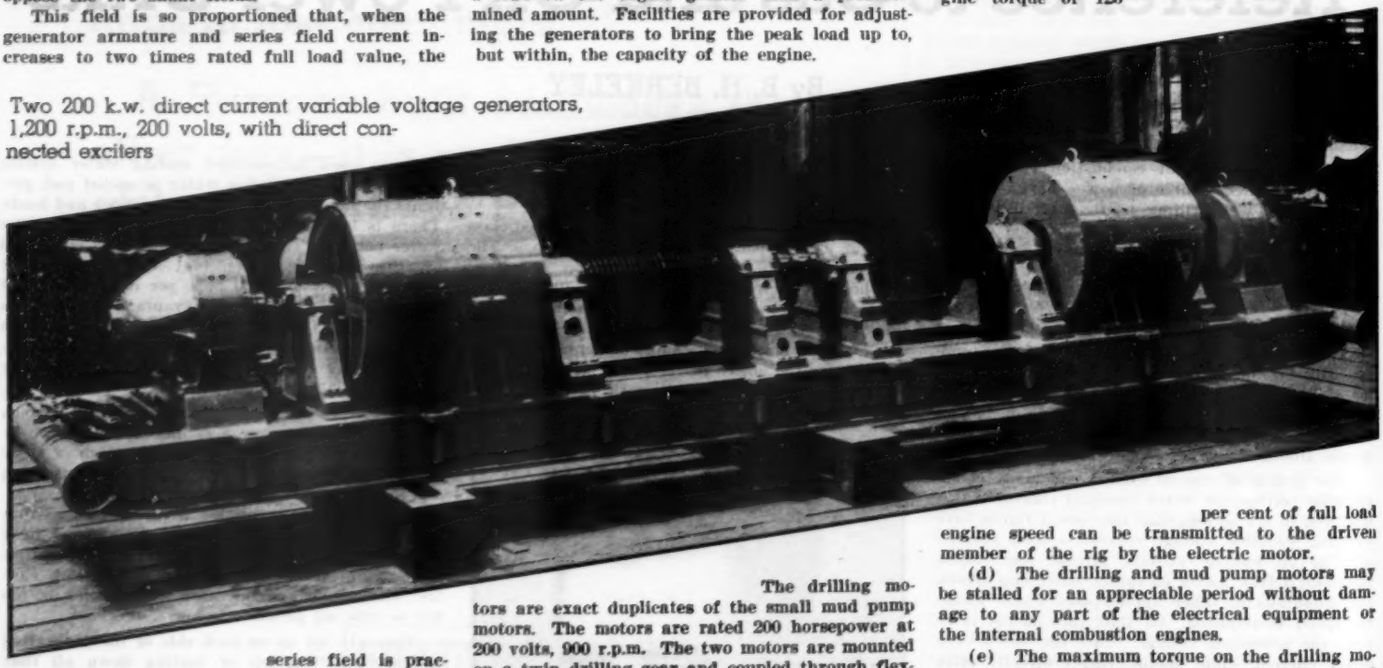
3—Coupling is closed practically all the time so that the engine driving the generator supplying power to the rotary table (which takes approximately 100 horsepower) will be able to supply the surplus engine power to the generator supplying power to the mud pump. The coupling when fully open will allow the V-belts to be removed without disturbing bearing alignment.

This paper, presented at the joint meeting of the Mid-Continent Sections of the A.S.M.E. and the A.I.M.E. in Tulsa February 10, deals with development of the engine-driven electric generator type of drilling rig.

The mud pump motors are of the shunt wound type for simplicity and ease of control. Their speed may be varied from zero to 900 r.p.m. by the driller adjusting the hand wheel located by the driller on the rig floor.

Either or both pumps may be operated from either or both generators with or without the drawworks motors.

This means that the hydraulic ends of the mud pumps can be compounded when extremely high pressures are required. Operating more than one motor on a generator sounds at first like the generator would be overloaded; that is not true because of the non-overloading characteristics of the generators, it is not possible to impose a load on the engine greater than a predetermined amount. Facilities are provided for adjusting the generators to bring the peak load up to, but within, the capacity of the engine.



Two 200 k.w. direct current variable voltage generators, 1,200 r.p.m., 200 volts, with direct connected exciters

The drilling motors are exact duplicates of the small mud pump motors. The motors are rated 200 horsepower at 200 volts, 900 r.p.m. The two motors are mounted on a twin drilling gear and coupled through flexible couplings. The twin gear unit has three gears in a housing all on a horizontal plane which causes both motors to run in the same rotation.

The motor armatures are connected electrically in series and their shunt fields in parallel. This means that at 200 volts, the motors operate at 450 r.p.m.

When the two generators are connected in series which gives 200 volts each, or 400 volts total, the drilling motors operate at 900 r.p.m.

The reason for using the twin gear and two motors instead of one motor and single gear rated 200/400 volts, 450/900 r.p.m., is in the case of a failure of a drilling motor, the remaining motor will be left to pull the drill pipe.

If the repair of the crippled motor will take considerable time, the duplicate mud pump on the small pump can be used and thus save down time and allow drilling to go on at normal speed.

The mud pump and drilling motors are equipped with motor operated blowers mounted on top of each motor. The duty of each blower is to force a blast of air through its respective motor to cool the windings when the motor is stalled due to stuck pipe, a fishing job and plugged bit, etc.

When the motors are operating in a gaseous atmosphere each motor driven blower is moved to clean air and air is piped back to its respective motor. This makes the motors protective type.

The motor driven blower is moved so that air is forced through pipe rather than left on the motors having air sucked through the pipe on account of leaks in the pipe allowing gas to be sucked in.

The generators, motors, and controllers listed herein were designed to provide a balanced rig which is easily manipulated, easy to maintain, flexible and efficient transmission between internal combustion engines and the various power driven elements of the rig. The combined operating characteristics of generators and motors are such that:

(a) The internal combustion engines may be operated at full constant speed which is their most efficient point and maximum power output, while the speeds of the mud pump and rotary table may be varied from zero to full speed.

(b) Means are provided for close adjustment of speed and torque, from zero to full load torque at standstill, and from zero to full speed at full load torque. Because of the inherent characteristics of the variable voltage system, the motor torque will not increase suddenly to impose shock loads on the chains, ropes, etc., such as occurs in a direct mechanical rig. Nor can the motor speed increase suddenly.

(c) The engines cannot be overloaded to the stalling point, although 200 per cent full load engine torque or 125 per cent of full load engine speed can be transmitted to the driven member of the rig by the electric motor.

(d) The drilling and mud pump motors may be stalled for an appreciable period without damage to any part of the electrical equipment or the internal combustion engines.

(e) The maximum torque on the drilling motors is at standstill. This allows loads to be started from rest without the operation of clutches. Maximum torque or hoisting at zero speed is ideal.

(f) The drilling motors may be reversed without declutching.

(g) One generator, one drill motor, and one engine will hoist as much drill pipe as both motors and both generators and both engines only at half speed. This is a very important feature as it allows the driller to come out of the hole in case trouble occurs in his equipment.

(h) Ample overload capacity is provided for emergency in that all generators and motors are rated 40° C. temperature rise continuous rating which means approximately 25 per cent increase in load can be carried in case of emergency.

(i) The driller has complete control of the mud pumps and drawworks and rotary table by means of a selector switch and two wheel, steam throttle type, control located at his elbow. The selector is used to place the two generators in series

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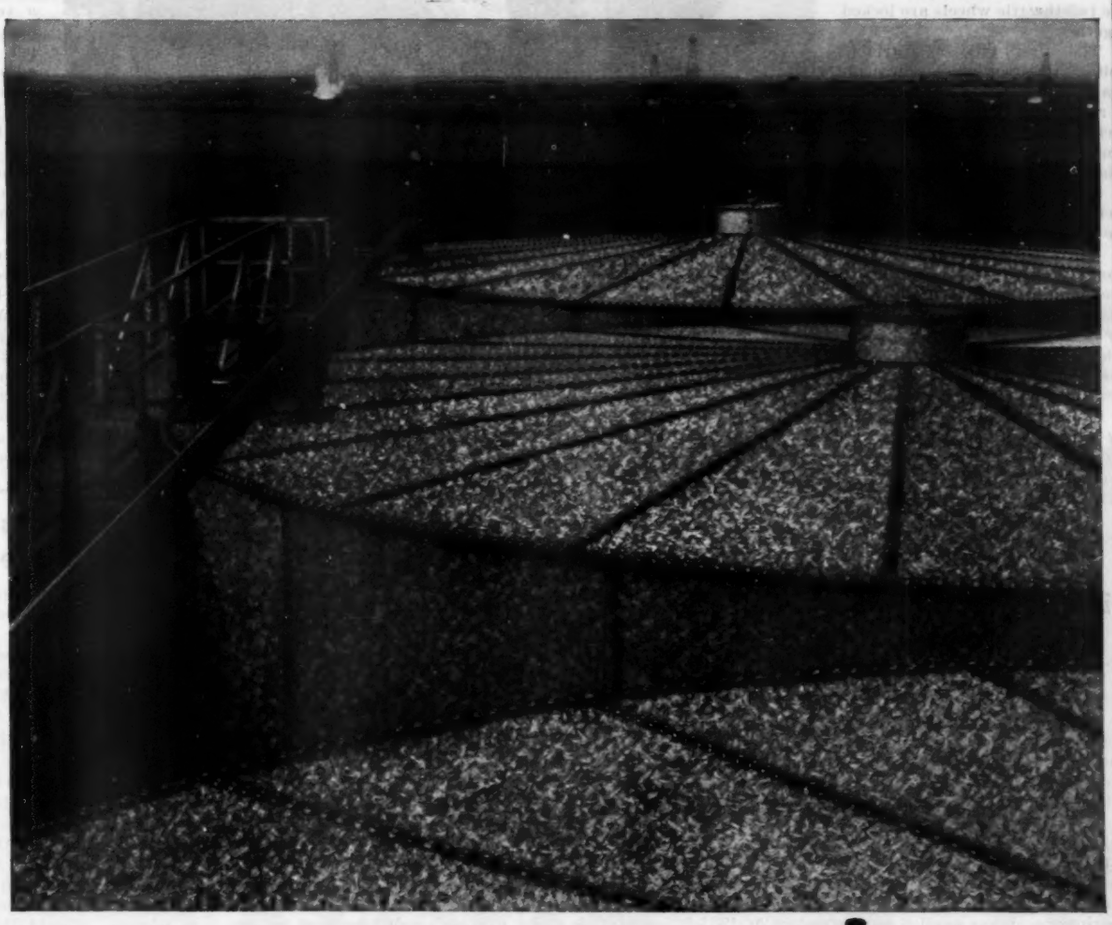

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when making a trip and also to place each generator on its respective mud pump and drilling motors. The two throttle wheels are used for; one for mud pump, and one for drilling motors. When both generators are placed in series on the drilling motors, the two throttle wheels are locked together.

The first type of variable voltage rigs required a very elaborate foundation. Today all that is required is a few 4-inch by 12-inch timbers laid flat on the ground and several H-beams crosswise to serve as slide rails to tighten the V-belts. When direct connected units are used, the H-beams are omitted.

Any type of shelter that will properly protect the men will be adequate for the equipment as all parts are drip proof. A number of contractors have had portable buildings constructed, both pipe frame and angle frame construction covered with sheet iron.

Twin gear units with two 200-horsepower direct current drilling motors operated at 900 r.p.m., 200 volts (See general plan below)

In designing this large variable voltage drilling rig we wanted a rig that was comparable to the largest steam rig in ease of operation and speed. We believe we have accomplished this. We must not lose sight of the fact that smaller variable voltage rigs can be built to effect similar savings in shallower fields.

Distillate Sprays Used to Kill Dandelions in Blue Grass

Experiments in the control of dandelions with petroleum sprays have discovered that certain of the higher boiling hydrocarbons contained in the groups sold commercially as distillates and kerosene show a remarkably differential action when sprayed on blue grass (Poa pratensis) lawns at the rate of 200 or 300 gallons an acre according to W. E. Loomis and N. L. Noecker, of Iowa State College.

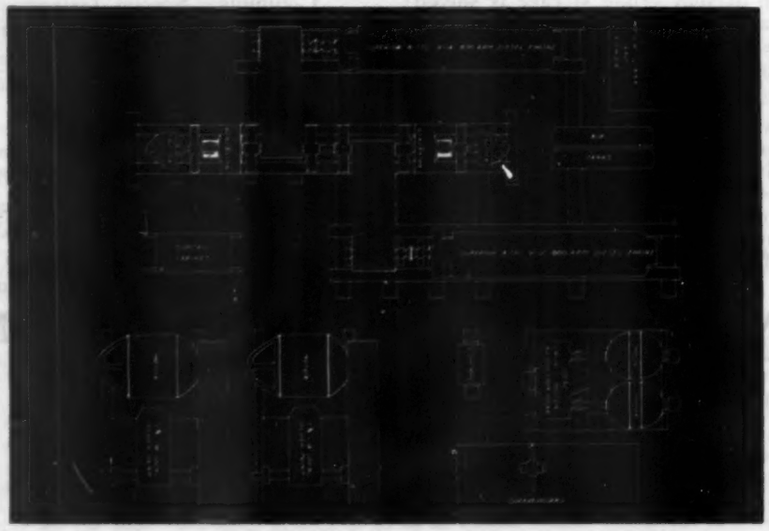
Under favorable conditions the dandelions are slowly but completely killed, while the bluegrass sod is only temporarily affected. In our experiments, sprays applied on September 20, 1933, in rather warm weather, resulted in a 70 per cent control of dandelions. Sprays applied on June 6, 1934, in the evening of a hot day, resulted in 63 per cent control. Sprays applied on a hot day in July of the same year were not carefully checked but gave no noticeable control. Sprays applied on October 1, 1934, in frosty weather resulted in controls of 99 to 100 per cent. Sprays applied on May 20, 1935, in distinctly cool weather (60° F.), have given a control of 95 per cent or better. It is not clear at the present time whether the stage of development of the dandelion plant at the time of applying the spray is the important factor or whether temperature with its effect upon vaporization of the applied material is the more important. We are inclined to think that temperature is at least a major factor, and would recommend spraying only in cool weather. Petroleum sprays will readily adhere to and penetrate the foliage, either wet or dry, of both dandelions and lawn plants so that a period of cool rainy weather in the spring or fall would appear to be a favorable time for application. Our results to date would favor fall applications, largely because fewer dandelion seedlings develop before the stolons of the blue grass have spread to fill in the open areas.

The material may be sprayed broadcast over the lawn at the rate of one-half gallon per 100 square feet or, where the dandelion plants are more scattered, a spotting method of spraying may be used. Applications in excess of 300 gallons an acre or about 3 quarts per 100 square feet may injure the grass, and the use of impure distillates showing a yellow coloration has resulted in a complete kill of blue grass and white clover sod, so that only the water-white products should be used, and even among these some appear to be more toxic to blue grass than others. This toxicity is reduced by washing the distillates with H_2SO_4 to remove unsaturated hydrocarbons.

The distillate sprays penetrate the leaves of the dandelion and other plants almost instantly and appear to be slowly moved downward through the roots. Injurious effects other than a cessation of growth may not appear for a week or 10 days, and frequently dandelion plants will continue to die for a month after the spray is applied. Under favorable conditions the entire root system of the plant is killed, and apparently the top dies as a result of this injury to the root. Under less favorable conditions only the upper portions of the root may be killed, and the plants may be reestablished by sprout development. The growth of seedlings, however, is under average conditions more serious than sprouting from the roots in the reestablishment of the dandelion plants. Plots sprayed on June 6, 1934, with straw-colored distillate sprays which killed both sod and dandelions, and reseeded with grass, gave an almost solid stand of dandelion seedlings which developed more rapidly than the seedling blue grass. Adjoining plots which were sprayed with water-white kerosene showed a 60 to 70 per cent control of the old dandelion plants, and as far as could be observed no seedlings were able to maintain themselves in the only temporarily injured blue grass sod. The ability of established sod to prevent the invasion of dandelion seedlings has been demonstrated by plots sprayed in May of 1933. Although completely surrounded by a very heavy stand of seedling dandelion infestation less than 2 per cent of that present on the adjoining control plots. Fertilization, including the use of ammonium sulfate at the rate of one-half pound per 100 square feet once or twice a year, is an important factor in maintaining a sod sufficiently close and heavy to prevent the invasion of dandelion seedlings.

In this report, which appeared in Science, the authors concluded:

We are continuing our work on the effect of biologic and weather factors and a more careful determination of the active constituents of the sprays. At present we are inclined to the view that saturated hydrocarbons of the medium boiling point series are the effective ingredients.



General plan of an engine-driven generator drilling rig

Device Gives Protection from Inflammable Gas Explosions

A new device which protects oil refineries, chemical factories and other places from explosions of inflammable gases was described at a meeting of the American Institute held recently in Rockefeller Center, New York. The subject of the meeting, "Gases in War and in Industry," was discussed by Lt. Col. A. Gibson, U. S. Army, and Murray D. Smith of the Davis Emergency Equipment Co., Inc.

Mr. Smith, in describing the various appliances used for protecting industrial workers from poisonous and explosive gases, demonstrated publicly for the first time an instrument known as the J-W combustible gas alarm which continuously analyzes the air at any desired point and indicates at all times the amount of any inflammable gas that may be present. Should the concentration of the inflammable gas rise so high that the resulting gas-air-mixture becomes combustible or explosive, the instrument can sound an alarm and start up ventilating apparatus or other protective equipment.

The gas alarm can be installed wherever there is constant danger due to the leakage of the vapors of gasoline, organic solvents, etc., said Mr. Smith. Air from the point to be protected is drawn continuously into the instrument and is exposed to the action of an incandescent filament in an explosion-proof chamber. If an inflammable gas is present, it will burn in contact with the filament. This action raises the temperature of the filament and changes its electrical resistance. This change is indicated on a dial graduated in terms of the explodability of the gas-air mixture, and when any predetermined concentration is reached, electric contacts are closed which puts into operation any desired kind of protective equipment.

Colonel Gibson, in discussing modern chemical warfare, stated there was no highly toxic gases known which will wipe out cities.

"Highly imaginative tales about gases which will wipe out whole cities have been circulated by writers who desire to attract attention by picturing in lurid colors the horrors of war," said Colonel Gibson. "In so far as our knowledge goes there are no gases that would accomplish such wholesale destruction."

W. H. Carson Presides at Joint A.I.M.E.-A.S.M.E. Meeting

Prof. W. H. Carson, director of the School of Petroleum Engineering, University of Oklahoma, Norman, Okla., started his term as chairman of the Petroleum Division of the American Society of Mechanical Engineers in a very auspicious manner by presiding at the joint meeting of the A.I.M.E. and A.S.M.E. held in Tulsa on the evening of February 10. Professor Carson told of the announcement in the university paper that he was to preside over a "dutch lunch and joint meeting," as the technical session was preceded by a luncheon. The management of the hotel had provided for about half of the 120 guests who attended, because many came unannounced, an indication of the popularity of the engineering meetings being held in the Mid-Continent section this year.

The meeting Monday night was held to discuss the general subject of "Power for Rotary

PROF. W. H. CARSON

Director, School of Petroleum Engineering, University of Oklahoma, Norman, Okla.

Drilling" and consisted of three major papers with written discussion of one of these papers. The group present was very representative of the engineers in both societies and the interest shown in the papers held the audience until after 10:30 p.m.

The first paper was presented by B. H. Berkley, with Westinghouse Electric & Manufacturing Co., Tulsa, and covered "Engine-Electric Drilling Methods, with Reference to Gas and Oil Engines," and is published in full in this week's Oil and Gas Journal. Mr. Berkley presented his facts in an interesting manner and used the lantern to show illustrations on the screen to good advantage.

Following Mr. Berkley a paper was presented by D. M. McCargar, Allis-Chalmers Co., Tulsa, in which he discussed the Straight A.C. electric drilling, purchasing power from high lines, and motor-generator units for rotary drilling in which alternating current is transformed to direct current for driving rotary table and pumps. Mr. McCargar handled his subject from notes and through the aid of numerous slides showed both pictures of installations of this type and many graphs of performance. This paper was discussed at some length after its presentation and coupled with the paper presented by Mr. Berkley covered this relatively new development in the drilling of wells by other than steam-powered rigs.

To cover the other side of this discussion on power for rotary drilling, V. Weaver Smith, vice president of the Broderick Co., Muncie, Ind., gave a very interesting paper on "Progress in Steam

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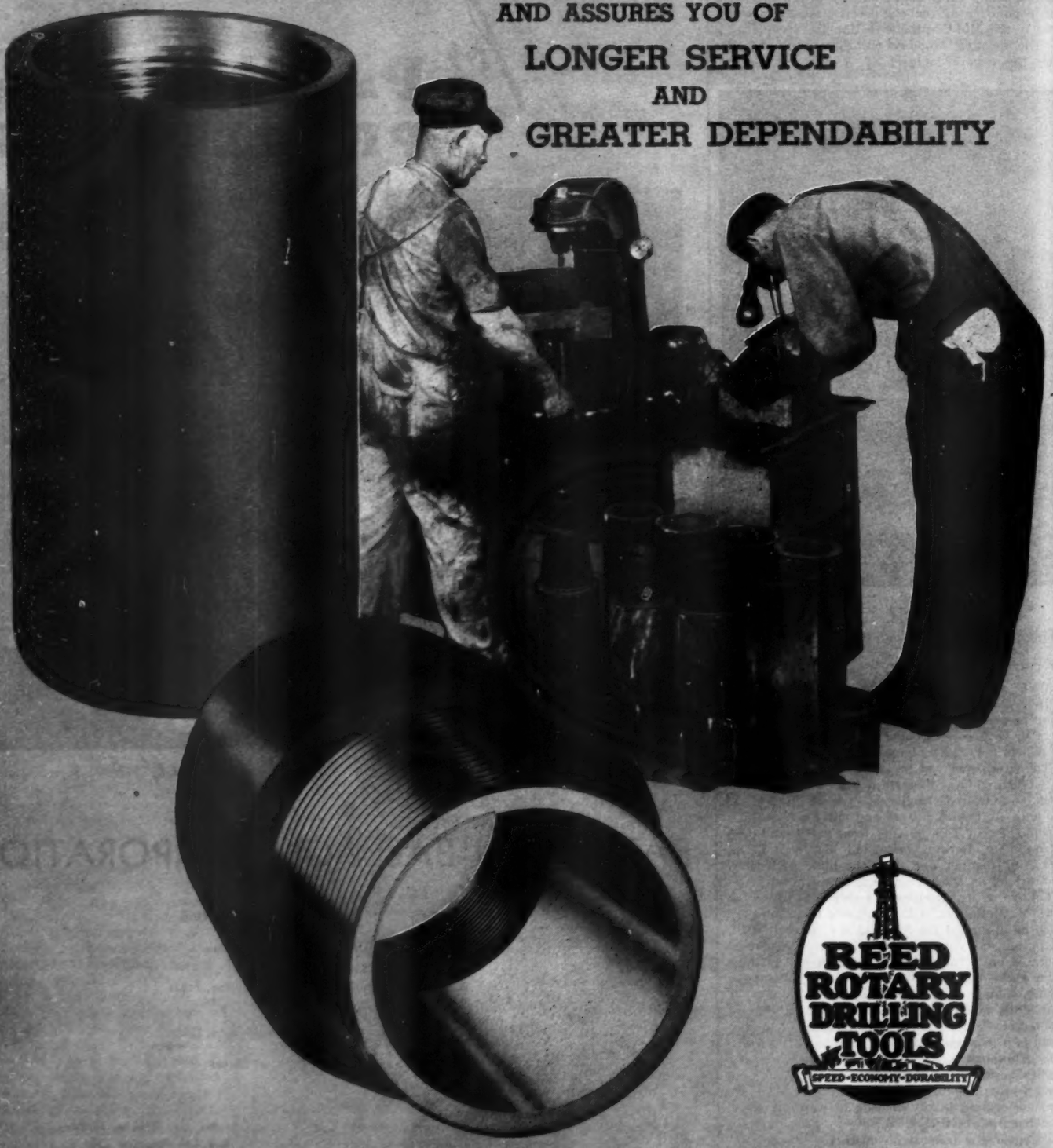

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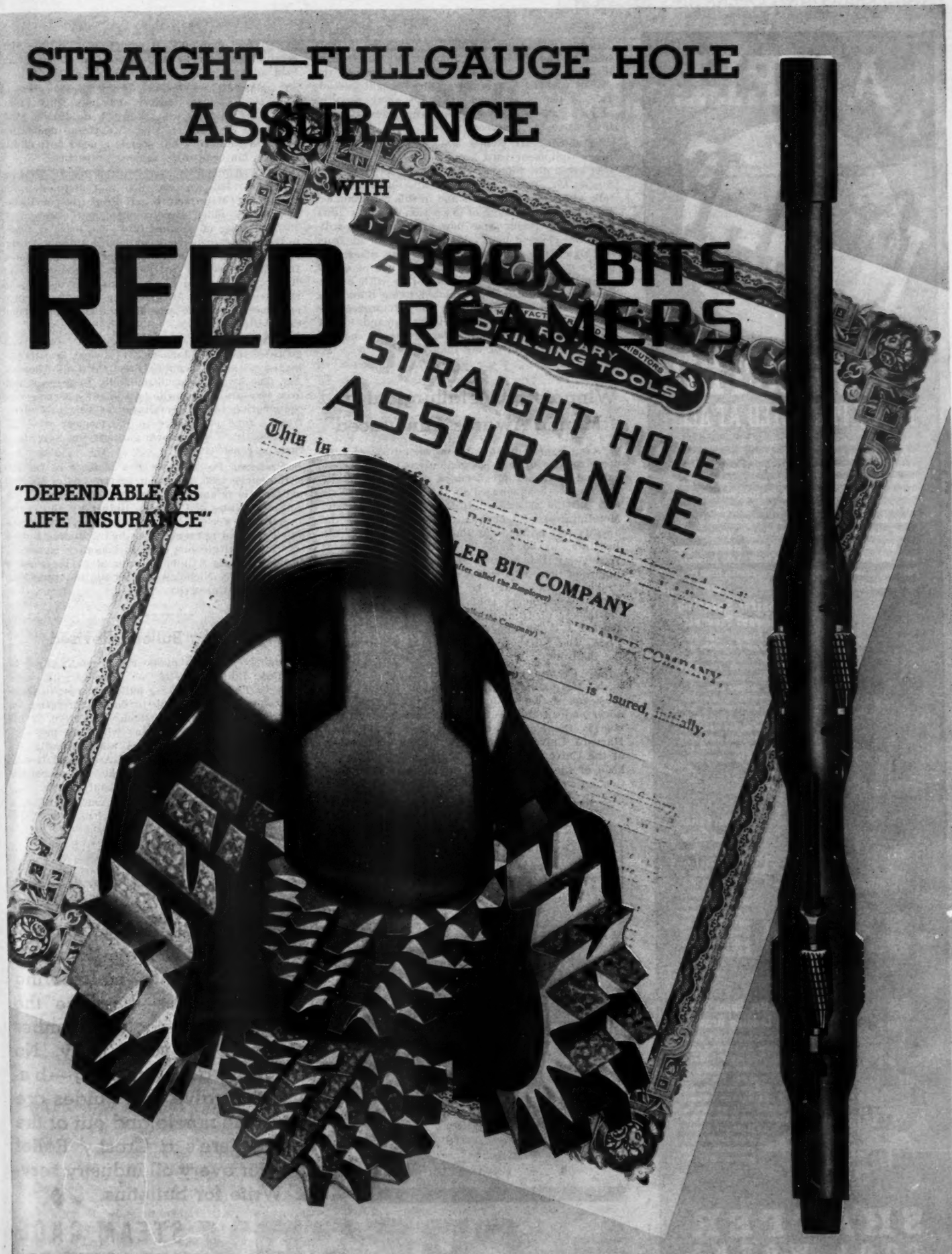

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The Shaffer Rotating Blowout Preventer provides a means for drilling under pressure without danger of blowouts at any time. It is used with regular drilling equipment and when combined as shown makes possible the complete control of pressure under any contingency that may arise.

Shaffer Cellar Control Gates
Two Shaffer Cellar Control Gates, one a master gate provides protection when the pipe is out of the hole and the other gives protection with the pipe in the hole.

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Drilling Equipment," which is presented in this issue of The Oil and Gas Journal. Mr. Smith handled his subject with much skill and through the use of various charts and graphs brought out numerous points developed through many tests of new and old type steam boilers that were of much interest to the engineers present.

Following Mr. Smith, a discussion of the auxiliary equipment used around a rotary steam rig was given by John S. Fuller, engineer, Oil Well Supply Co., Tulsa. Mr. Fuller also illustrated his talk with slides and prints and in this way rounded out a very full evening of discussion of power units of the three major types now used in rotary drilling; the electric unit taking current direct from the high tension electric line; the unit where the direct current is generated by the use of diesel engines and the modern steam rigs with superheaters, venturi stacks, insulated steam lines, vertical engines and numerous other improvements made in recent years to meet the demands of oil companies and contractors for greater economies in this department of the industry.

Winners of Metallurgical and Mining Awards Announced

Awards to four mining and metallurgical engineers for distinguished contributions to the technical and economic advancement of the mineral industries were announced by A. B. Parsons, secretary of the American Institute of Mining and Metallurgical Engineers. Presentation of the awards will be made at the annual dinner of the institute, to be held in New York City next Wednesday, February 19, at the Commodore Hotel. Names of those who will receive honors are Clinton Crane, to whom will be presented the William Lawrence Saunders gold medal; C. C. Henning, the Robert W. Hunt prize; Francis Hearne Crockard, the J. E. Johnson, Jr., award, and Prof. Robert Peele, who will be made an honorary member of the institute.

Mr. Crane, to whom is awarded the Saunders medal for distinguished achievement in mining, is president of the St. Joseph Lead Co., largest producer of lead and one of the largest producers of zinc in the United States. He is a graduate of Harvard University and took post-graduate work at the University of Glasgow. He has been at the head of the lead company for 20 years. The citation accompanying the award states that it was given "for distinguished achievement in the successful development and operation of low-grade lead mines."

Among other recipients of the Saunders medal have been Herbert Hoover and John Hays Hammond. In 1935 it was awarded to James MacNaughton of Calumet, Mich. Mr. Crane makes his office in New York but spends a good part of his time at his company's various properties.

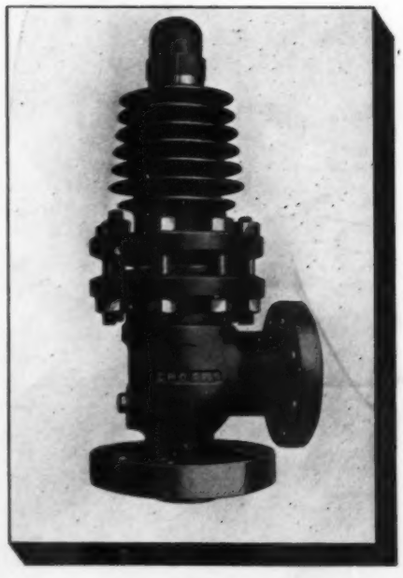
C. C. Henning, who receives the Robert W. Hunt prize for 1936, was awarded that distinction for his paper, "Manufacture and Properties of Bessemer Steel," which was presented at the February, 1935, meeting of the institute. The prize is given to the person or persons contributing the best original paper on iron and steel and is made from a fund established by the partners and employes of Robert W. Hunt in honor of his contributions to the steel industry. Mr. Henning is assistant general metallurgist of the Jones & Laughlin Steel Co. of Pittsburgh, Pa.

Francis Hearne Crockard, who has been awarded the J. E. Johnson, Jr., award, is a metallurgist with the Republic Steel Corp. at Thomas, Ala. The award is made annually to persons, not over 40 years of age, who have made a meritorious contribution to the metallurgy of iron and steel, from a fund established in the memory of J. E. Johnson, Jr., a well known authority on iron blast-furnace construction.

Professor Peele has been a member of the institute since 1883, joining it 12 years after its formation. He is emeritus professor of mining in the School of Mines at Columbia University and is the author of "Peele's Mining Handbook," which is an established reference book in the mining industry. The institute has only 16 honorary members. Professor Peele will be introduced at the annual dinner by Dr. Nicholas Murray Butler, president of Columbia University.

Gauging Bulletin Revised

Shortly after its publication, certain pages in C.N.G.A. Bulletin TS-341 on tank gauging were revised. Those purchasing bulletins prior to these revisions do not have up to date information on the provisions of this method. Therefore, if all purchasers of these bulletins will send pages 2, 2-A, 3, Appendix II page 4-A and Appendix III page 3 to W. W. McIlhany, 1217 Associated Realty Building, Los Angeles, Calif., he will exchange them for the revised sheets without charge.



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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Solvent Refining Agents Toxic and Related Properties-Sulfur Dioxide

This is the seventh of a series of brief articles relating to the physiological and toxic properties of the substances used in the solvent extraction methods for the refining of lubricating oils. The previous subjects were: Benzene, phenol, chlorex, cresol, nitrobenzene, and furfural. The first, benzene, was published in the issue of December 19, 1935.—Editor.

Sulfur dioxide. Formula SO_2; specific gravity 1.4337; melting point —99° F.; boiling point 14° F.; freely soluble in cold water, about 8,000 parts in 100 at 32° F., soluble in ether, alcohol, sulfuric acid and other substances. This is under normal conditions a colorless gas with a penetrating pungent odor, but is easily reduced to the liquid form with a slight reduction of temperature and increase of pressure. The liquid form is used for the refining of lubricating oils.

Sulfur dioxide is a strong irritant poison but seldom taken into the human body in fatal quantities because it is so irritating to the nose and eyes that anyone exposed to even very small quantities immediately rushes to the outside air to obtain relief. Exposure to small quantities causes a person to cough, then follows smarting of the eyes and throat with constriction of the chest and bronchitis. A person overcome with sulfur dioxide suffers respiratory spasms, drops rapidly into asphyxia and dies in a very short time. When so little as 20 parts per million are present in the air it is enough to cause watering of the eyes and irritation of the throat. If 0.05 per cent, 500 parts per million, is breathed it is enough to cause difficult breathing and dangerous if the exposure is continued.

There are very few cases of acute poisoning from sulfur dioxide, probably because dangerous quantities are practically irrespirable as the irritation is too intense to permit. A person exposed to a lethal quantity may live for some days; one case is recorded stating that a man who had been almost overcome by the gas returned to work but later was seized with repeated chills and died 20 days after the exposure.

It is possible for animals and men to become accustomed to the gas. Tidy made tests in which he succeeded in habituating mice to an atmosphere containing gas from 10 grains of sulfur dioxide, while at the start they suffered in air containing the gas from only half a grain. Lehmann found that men accustomed to the exposure did not appear to object to the presence of 40 parts per million in the air as did unaccustomed persons to air containing 10 parts per million.

References—Tech. Paper 248, U. S. Bureau of Mines, Fieldner, Katz and Kinney, 1921.

Tidy, Forensic med. and tox., 495, 1877.

Lehmann, Concordia, Nos. 7, 8, 9, 1903.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit problems to Dr. C. K. Francis. Questions should give as much detail as possible. Inquiries must be signed but only the given initials will be printed. The source of questions is considered confidential. Questions requiring discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered in these columns.

Inhibited Acids Originated in the Pickling of Metals

What is the meaning of inhibited acids and how are they used? I am especially interested to know what application is made of such acids in the petroleum industry.—G. C. A.

The use of inhibited acids in the petroleum industry is based on the experience gained in metal pickling, a term applied to the operation of cleaning castings and forgings, usually iron or steel, in acid solutions. This cleaning is done to smooth the surface of the metal in preparation for some finishing treatment, such as polishing, painting, or electro-plating. The material removed includes sand, particles of slag and scale.

The two common acids, sulfuric or hydrochloric, are used to make a bath in which the material is immersed to remain from a few seconds to possibly half an hour. The quantity of sulfuric acid in solution may vary from 3.5 per cent to 8 per cent and the strength of the hydrochloric acid from 10 to 15 per cent. The data given in the table may be used for making these solutions. Quicker results are possible when the baths are hot so it is the practice when pickling to keep the solutions between 140° to 180° F.

SULFURIC AND HYDROCHLORIC ACID SOLUTIONS

Be°	Per cent sulfuric acid	Pounds 66° sulfuric per 100 gals. solution	Per cent hydrochloric acid	Lbs. 100% hydrochloric acid per 100 gals.
2	2.08	18.86	2.82	23.8
3	3.13	28.59	4.25	36.2
4	4.21	38.72	5.69	48.8
5	5.28	48.90	7.15	61.7
6	6.37	59.41	8.64	75.1
7	7.45	69.95	10.17	89.0
8	8.55	80.92	11.71	103.2
9	9.66	92.05	13.26	117.7
10	10.77	103.43	14.83	132.7

The purpose of an inhibitor in these acid baths is to retard the action of the acid on the metal while it is attacking the scale and other impurities on the surface of the metal. Before it was discovered that some substances acted to cause a selective action there were numerous objections to pickling. It is now recognized that an effective inhibitor, such as arsenic and related elements, overcome the disadvantages surrounding the use of pickling baths that have not been modified by the addition of some inhibiting compound.

Inhibitors reduce metal losses, because there is very little action on the metal; also, less acid is required to do the work as acid is not destroyed in working on the metal. There is not so large a volume of gas escaping from the liquid that tends to fill the air with a mist which contains droplets of the acid. This acid spray is injurious to the health of the workmen, injures all equipment whether of metal or wood and frequently causes extensive repairs to buildings.

The use of inhibited acids in the petroleum industry is limited to the cleaning of boiler-tubes, exchangers, drums, and in a larger volume for increasing the production of oil wells where the oil is from a formation containing lime.

White Mineral Oil in Two Grades Has Many Applications

What uses are made of white oil, other than for medical purposes? Are there any uses made in the industries for large quantities of this oil?—D. E. H.

It is usually thought that white mineral oil is little used other than as an internal lubricant and for the preparation of salad dressings, also in the manufacture of certain cosmetics and pharmaceutical preparations. However, there are numerous other uses; a brief mention will be made of the more important.

There are two grades of white oil, medicinal and technical, the chief difference being in color, odor and taste, the medicinal grade being free from color, odor and taste, while the technical grade may have a very light brownish to yellowish color, a little odor and slight taste. These grades may be obtained ranging in specific gravity from 0.860 to about 0.890 (33 to 27.4 degrees A.P.I.) and Saybolt Universal viscosity at 100° F. from 75 to 345 seconds.

The textile industry is a large consumer. It is applied for lubricating knitting machines and for preventing the corrosion of needles; also for compounding with animal and vegetable oils for other purposes than lubrication. White mineral oil compounded with other oils will prevent rancidity and reduce objectionable odors. The oil is applied to wool, rayon and cotton before spinning. Softening and finishing oil improves the feel, also to soften gums and render the thread pliable. It is used to soften wool after degreasing and for all textile materials in many processes for dyeing, degumming and delustering.

Increasing quantities are applied as agricultural sprays. This use is especially large in California as a component of the summer sprays. This oil does not damage the leaves or the developing fruit.

The permanent lubricant for mechanical refrigeration units is white oil, which is sealed into the compressor for the life of the unit. The purity of the oil being free from moisture, acid and sulfur makes it suitable, for as it comes in contact with the refrigerant there is no tendency to corrosion or sludge formation.

Analyses of the Oklahoma City and Oxford, Kansas, Crude Oils

Would you please supply us with analyses of the crude oil produced from the Oxford pool, Sumner County, Kansas, and from the field at Oklahoma City?—G. A. S.

ANALYSES OF OKLAHOMA CITY AND OXFORD, KANSAS, CRUDE OILS

	Oxford	Oklahoma City Wilcox sand
Gravity, A.P.I.	39.0	38.8
Sp. gr.	0.830	0.831
Color	Greenish black	Brownish green
Pour point	below 5°F.	below 5°F.
Sulfur, per cent	0.21	0.14
Say. U. vis. at 77° F.	42	....
Same at 100° F.	39	46
Gasoline	22.5	28.5
Grav. 60.8		Grav. 62.6
Kerosene	12.2	15.7
Grav. 42.8		Grav. 42.8
Gas oil	16.3	7.7
Grav. 35.8		Grav. 35.4
Lube dist.	18.2	17 6
Residuum	18.4	28.9
Grav. 16.4		Grav. 21.8
Loss	2.4	1 6

These analyses were made by the U. S. Bureau of Mines.

PROBLEMS FROM READERS

Edited by T. F. Smiley

Would It Injure His Wells to Allow Unneeded Gas to Escape in Air?

We are pumping some new wells drilled in an old field. They are about 2,000 feet deep. I don't know the exact formation pressure. The oil is 42-gravity and a new well, by the time it is cleaned out after the shot, will fill up approximately 500 feet. According to the way of determining the pressure from the quantity of fluid in the hole, it would be more than 400 pounds, but I have checked it with gauges at the casinghead and they never have shown more than 30 pounds there. The wells produce 3,000 to 4,000 feet of gas daily. We have little or no use for the gas, and when it is shut in the well the production decreases. I want to know whether it will do the wells any harm to let the gas blow off into the air in order to keep the pressure down to about zero. I am satisfied the oil and gas are in solution in the sand. There is very little water. The producing formation is a rather tight sandstone.—E. W. P.

A column of oil of this gravity would exert a pressure against the formation of about 175 pounds. This is estimated by multiplying the height of the column, 500 feet, by .43 pound, the pressure exerted by 1-foot column of water with a gravity of 1. This gives us a pressure of 215 pounds and as the specific gravity of the 42-gravity oil is .8156, the 215 pounds is multiplied by the specific gravity and the result is 175.354 pounds pressure per square inch exerted at the base of the column.

It is understood from your letter the shut-in pressure at the well-head is 30 pounds per square inch and the well will make between 3,000 and 4,000 feet of gas a day. This would indicate the well-head pressure is due to an accumulation of gas above the oil and this gas, in order to reach this position in the hole, must have formation pressure in excess of 175 pounds or else it must be gas escaping from the oil after it has entered the well. You failed to give the well's capacity, that is, how much oil it will produce, so engineers consulted cannot compute gas-oil ratio and make any determination of saturation of gas in the oil.

As to your problem of bleeding off the gas, there are two main points to be considered. First, will the relief of the 30 pounds back pressure on the sand created when the well is shut in do more to create additional flow of oil into the well than will the maintaining of a more viscous condition of the oil by retaining in it the natural gas accompanying it from the formation?

To put this in another way, if the valve at the casinghead is cracked and the gas is allowed to escape steadily, there should be very little pressure built up at the casinghead. The formation will then only be required to produce against the oil column in the hole or approximately 175 pounds pressure. If the oil is pumped from the well and this column held to a minimum height the formation will be able to produce the oil more freely, and while the well is producing back pressure against the formation will of course be lowered.

An important fact to be remembered in producing any well is that the gas in solution in the oil tends to make the oil more free-flowing and therefore easier to move through the sand pores to the well. You have some free gas in your oil because you state that the well will produce between 3,000 and 4,000 feet a day. It follows this gas is helping to thin the oil, and if you bleed off the gas you are not only removing the gas from the oil in the well itself but there will be a tendency for the gas in the formation to by-pass the oil and escape to the well. This tendency to rob the oil in the formation of that gas still sat harder to flow through the sand pores, especially when the pores are small, as in this case.

While this change in viscosity might be slow, it certainly will have an effect on ultimate recovery because when the free gas has escaped from the oil the remaining oil will have a greater tendency to stick to the sand grains and move slowly through the sand pores.

Without information in regard to the method of producing the well other than that you are pumping, it is difficult for engineers to say whether it would be better to bleed off this gas or produce the well at a back pressure, but there is a disposition to believe if the well is pumping, your gas will be producing with the oil and casinghead pressure, therefore, will be close to zero.

Since you have a tight sand it is recommended that you conserve all the gas possible, leaving the gas in solution and producing it only with the barrel of oil with which it is associated.

Readers are invited to send questions relating to drilling, producing and transporting operations. These questions will be referred to persons capable of answering authoritatively. The names of those writing for information will be held confidential, initials only being published. This department cannot undertake to answer questions involving royalty or other investments, patents or intricate formulas or questions which should be submitted to consulting engineers, geologists or lawyers.

WHY THEY CALLED IT *Mucker*

Any pipe line several hundred miles long is likely to encounter various soil conditions along its route. The ponderous ditcher leaves a cleanly cut trench which may be 7 feet deep and 3 feet or so wide. Under favorable conditions the trench will remain intact till all work is completed, but in sandy or wet soils the sides may crumble and cave in. When this occurs a gang of "muckers" is kept busy removing with shovels the cavings which slide into the ditch. Sometimes these hand workmen are unable to keep the ditch clear, in which case it may be necessary to shore up the walls until the pipe is in place. The word "mucker" was applied to a shoveler in mining work, and by extension is used now to designate almost any shovel workman.

How Moisture Gets in the Gas Line and the Problems It Creates

I am interested in the problems rising from the presence of water in natural gas lines. I would be grateful for an explanation of just how water gets in the lines and just what difficulties result from its presence.—S. E. N.

To begin with, moisture may be found in natural gas lines both as a liquid and as a vapor or as a vapor only. If in liquid form it may create various difficulties in the process of transporting and measuring the gas. Answering your question more in detail, the following discussion is provided by E. G. Hammerschmidt of the Texoma Natural Gas Co.:

When natural gas remains in contact with liquid gas, it will acquire water vapor from the liquid until the gas is said to be "saturated" with the water vapor. It is not possible for the gas to contain a greater stable concentration of vapor, because as soon as the vapor pressure of the liquid is exceeded by the partial pressure of the vapor, condensation takes place. The vapor content of the saturated gas is determined entirely by the vapor pressure of liquid water and may be predicted directly from vapor pressure data.

When natural gas emerges from the well, it usually is saturated with water vapor. Therefore, if the temperature of the pipe line through which the gas is to flow is lower than the temperature of the emergent gas, water will immediately condense on the walls of the pipe. If this water remains in the liquid state it can be partially removed by means of traps or "drips" in low places along the pipe line. If the water solidifies, the situation becomes more complicated. This solidification is not simply ice or frozen water. It has been found that methane, ethane, propane, isobutane, carbon dioxide and hydrogen sulfide, all of which may be constituents of natural gas, will unite with water to form crystalline gas hydrates. A hydrate is a compound in which water is present in fixed and simple molecular proportions. These natural gas hydrates as formed in pipe lines, regulators, meter runs, etc., usually resemble ordinary snow, although in cases where there is little if any agitation the resultant hydrate will be transparent like ordinary ice.

Accumulation of water in low spots along a gas line may seriously diminish the capacity of a pipe line. Blowing of drips to remove water causes a waste of gas. Liquid water is usually one of the contributing causes wherever serious corrosion occurs. Water together with pipe line scale or even water alone may cause erosion of the pipe. Water in meter runs causes inaccurate measurement. Water in an intake line to a gas compressor engine may result in a head failure. The water may solidify and cause partial or complete plugging of pipe lines, meter orifices, valves or regulators.

California Well Sets a New Record by Running Longest Casing String

Since publication January 23 of a question and answer concerning the longest string of casing ever run into a well this department has received a report of a new record, made in December, 1935, in the Union Oil Co.'s No. 1 Lillis-Welsh, North Kettleman Dome field, California. This string of 6⅝-inch was set and cemented at 10,815 feet. The string of 7⅝-inch, cited as the record one in the answer to A. G. N.'s question, was 10,301 feet long It was run in the Gulf Production Co.'s No. 103 McElroy, in Upton County, Texas.

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Michigan Field Report

MICHIGAN'S WORST BLIZZARD HAMPERING OIL OPERATIONS

By
PAUL A. ELLIOTT

MUSKEGON, Mich., Feb. 10.—Although completely snowed under in Michigan's worst blizzard last week, operators brought in several important oil and gas producers. Brehm-Hollman Oil Co. brought in No. 1 Thomas E. McCann, NW NW SE section 20-15n-2w, Geneva Township, Midland County, as the second and largest producer in a new upper Traverse field indicated last summer when the same company brought in No. 1 William Gould after three years of development.

The McCann well first encountered a show of oil 129 feet in the Traverse at 3,104 feet. Oil rose in the hole and the well started flowing within 12 hours at an initial rate of 20 bbls. an hour. Later it settled to about 10 bbls. an hour and was rated at least a 200-bbl. well. Though originally started as a Dundee test it will be produced from the Traverse as long as profitable. The nearby Gould discovery well is still making 60 bbls. a day and the company plans another test on the Hyde lease in section 21. The company also has moved in a rig on the James estate east of the McCann lease.

King Drilling Co. has moved in a rig for another test in the new Midland County field on the George Gould lease, SW NW NE section 19, same township, north of the discovery well, and is awaiting weather to start a well on the State Bank of Coleman lease as a west offset to the William Gould well. The McCann well is about a mile east of the discovery.

Other Midland Wells

Pure Oil Co. No. 1-C Emma O. Reed, C S half SW SE section 1-13n-2w, Jasper Township, also was drilled into the Dundee to a total depth of 3,439 feet. It was estimated good for 175 bbls. a day, but was to be treated. Pure reached more than 3,400 feet in No. 2 D. Alspaugh, C S half SE NW section 2, Jasper Township, to be completed soon.

Three near completions by Pure in the Porter Township field, Midland County, included No. 21 Mina Narmore, NW NE SW section 15, drilled to 3,425 feet but probably to be deepened a few feet; No. 8 Floyd Younglove, SW SE SW section 17, drilling at about 3,150 feet, and No. 8-C Laura E. Root, SW NW NW section 20, drilling at about 3,000 feet.

Gas Wells

Two new gas wells in the Millbrook-Hinton-Belvidere Townships field of Mecosta and Montcalm Counties added 25,000,000 feet of open flow production, while a third had drilled into a flow of 12,000,000 feet a day and was still drilling. The larger wells was Ide & Glavin No. 3 Gas Co. No. 2 Isabel Wood, C NE NE section 10-12n-7w, in the Belvidere Township, Montcalm part of the field. It had a flow gauged at 23,400,000 feet from the Michigan Stray sands topped at 1,221 feet and drilled to 1,240 feet.

Edward Stewart completed No. 2 H. G. Houghton, C NE SE section 33-13n-7w, Millbrook Township, Mecosta County, with a flow of 11,600,000 feet from the Michigan Stray sands. It was drilled 27 feet in the sands from 1,263 to 1,290 feet. Gas pay was topped at 1,279 feet.

The third assured new gas well was Charles Bell No. 1 L. C. Culey, C SE SW section 30, in Millbrook, which topped the Michigan Stray at 1,288 feet, hit 8,000,000 feet a day at 1,294 feet and had increased to 12,000,000 feet with more drilling contemplated before completion.

Five other tests in the three gas producing townships of the field were nearing possible pay in the Michigan Stray sands as follows: Wiser Oil Co. No. 1 E. D. Oberlin and George Howse, C SW SW section 30, and No. 1 Elgin Crane, C N half SE NE section 33; Fletcher & Leman No. 2 E. P. Taylor, C NW SE section 30, all in Millbrook Township, and Superior Drilling & Producing Co. No. 1 and No. 2 Milton F. Eckert, the first in C SW NE section 10 and the latter C NW NE, same section, both in Belvidere Township.

Taggart Brothers, Inc., had reached more than 3,900 feet in No. 20 on the J. M. McKeough lease, C SW SW section 2-14n-9w, Austin Township, Mecosta County, with shows of oil, gas and water reported in the Monroe limestone after the Dundee failed to produce.

Crystal Township

Daily Crude Oil Co. No. 4 John Tow, NE NW SW section 2-10n-5w, Crystal Township, flowed 200 bbls. in 15 hours after treatment quadrupling an initial of about 50 bbls. daily struck between 3,198 feet, top of the Dundee, and 3,201 feet, bottom of the hole.

McClanahan Oil Co. was running tubing in No. 1 F. A. and E. Jarfster, NE SE NE section 4, Crystal Township, which had been making 75 bbls. a day swabbing and flowing through the casing. John Vale No. 1 George Barger, NW SW SE section 2, same township, was to be treated after swabbing 15 bbls. a day at a total depth of 3,199 feet.

Gordon Oil Co. had cased No. 7 William E. Strait, SW NE SW section 3, Crystal Township, at 3,160 feet and was awaiting weather to drill into the Dundee.

Jetter Oil Co. reported a flow of 4,500,000 feet of gas when the Michigan Stray and the Marshall were encountered together at 1,065 feet. Drilling had been continued to 1,100 feet.

Ferris Township

Isabella Oil Co. No. 1-C William Strait, SW NE SE section 34-11n-5w, Ferris Township, which showed 200 bbls. in the hole two weeks ago, developed into an assured light producer but awaited orders before treating at 3,209 feet, 7 feet in the Dundee.

J. E. Evans, trustee, No. 1 James A. Duffield, SW NW SW section 25, same township, was abandoned at 3,245 feet after topping Dundee at 3,202 feet and striking bottom water at 3,238 feet.

Four other Ferris Township tests were nearing completion but held up by the storm: T. F. Caldwell, Inc., No. 7 Jesse Flint, SE NE SW section 35, in which casing was reset after a show of 15 bbls. a day at 3,194 feet; Daily Crude Oil Co. No. 1 E. J. Fulford, SW NW SW section 36, cased at 3,175 feet; and Isabella Oil Co., Inc., No. 2 Albert Conner, NE SE NE section 27, cased at 3,185 feet, and No. 1 Conner, SE SE NE same section, drilling about 3,000 feet.

T. F. Caldwell, Inc., was preparing to deepen No. 1 W. H. Pugsley, SW SE NW section 36, Ferris Township, unsuccessful in the Dundee.

Other Fields

Consolidated Petroleum Producers, Inc., No. 1 Evan Crowe, SE NE SW section 36-22n-2e, West Branch Township, Ogemaw County, flowed from the Traverse and was shut down pending decision whether to drill to the Dundee or produce in the upper pay.

John C. Newell No. 1 Charles Husted, SW SE NW section 36, same township, was shut in after treatment and inaccessible because of the storm. Ogemaw County was one of the worst hit oil sections as it is about 50 miles north of the Mount Pleasant area.

United Drillers, Inc., No. 1 Augusta Schwaim, SE SE NE section 19, West Branch, was completing before the storm struck. Melling Oil & Gas Co. No. 3 L. Roma, NW NW NW section 6-21n-3e, Mills Township, was completing in the Dundee with no report of production. Chartiers Oil Co. No. 2 John West, C W SE SE section 12-15n-4w, Isabella Township and county test, topped the Dundee at 3,656 feet and had been drilled to 3,711 feet with no report except indications of commercial production. J. C. Aber No. 1 John Murphy, NW NW SW section 12-14n-5w, a Deerfield Township wildcat, was reported to have encountered a slight show of gas in the top of the Marshall but nothing in the Michigan Stray sands. It was shut down.

T. T. Hawksworth No. 1 State Department of Conservation, SE NW SW section 34-15n-3w, Denver Township, Isabella County, was casing at 3,555 feet. Schelling No. 1 Rose Mitchell, NW SW SE section 34, same township, was drilling below 3,300 feet. Chartiers Oil Co. No. 1 Frank Mumy, NE NE NW section 3-14n-3w, Chippewa Township, was drilling below 3,000 feet.

The deepest of eight tests in Gladwin County, where new interest has been aroused by several completions, was M. F. Whitehill No. 2 Charlotte Dell, NE SW SW section 2-17n-2w, Beaverton Township, fishing below 3,100 feet.

J. Garfield Buell and Seth W. Herndon No. 1 Marion Smith, NW NE NW section 29, was dry at 3,255 feet after encountering water at 3,252 feet. Dundee was topped at 3,245 feet. Leon B. Syres, trustee No. 1 David A. Bretz, NE SE NE section 21-18n-7w, Sylvan Township, Osceola County, also was abandoned at 3,983 feet.

Daily Production

Average daily production of 13 Michigan oil fields climbed over 40,000 bbls. again during the week ended February 1 through increases in three of the leading older fields, Porter-Yost, from 19,712 bbls. daily to 19,726 bbls.; Greendale-Chippewa, 2,403 bbls. to 2,893 bbls. and Vernon-Leaton, 1,449 bbls. to 1,920 bbls. daily.

The Crystal-Montcalm County field remained about the same, varying only from 12,844 bbls. to 12,739 bbls. daily. Ogemaw fields also made about the same, or 1,668 bbls. daily compared with 1,674 bbls. The Montcalm-Home Township field increased from 181 bbls. to 378 bbls. daily and Beaverton dropped from 409 bbls. to 336 bbls. a day. Six other fields, including Hemlock, Saginaw, Birch Run, Muskegon-Oceana, Vickeryville and Tuscola remained about the same, all involving comparatively little production.

New Locations

Ten permits for locations in six counties and two transfers were granted by the oil and gas division of the state conservation department. Two were for wildcats. Frank C. Cheers will drill No. 1 Dr. G. Wilson, NE NW NE section 34-6n-3e, in Shiawassee Township and County. John Inglon took out the other wildcat permit for No. 1 Herbert A. Kurrasch, SW SW SE section 10-27n-8e, Hawes Township, Alcona County.

Wildcat Tests

Socony-Vacuum Oil Co. No. 1 R. P. McCarbery, NW NE NW section 36-5s-5e, Macon Township, Lenawee County wildcat, was reported to have filled the 2,550-foot hole with oil after a 160-quart shot in the Trenton. The lower formation was topped at 2,450 feet, first pay struck at 2,456 feet and drilling suspended at 2,552 feet. Other pay streaks were reported at 2,462 and 2,465 feet with an increase at 2,546 feet. It will be tubed and pumped.

Max Pray No. 1 Victor Barothy, SW NW NW section 29-17n-15w,

(Continued on Page 54)

Southwest Texas District

By
GEORGE WEBER

NUECES COUNTY LEADER IN NEW AND COMPLETED WORK

SAN ANTONIO, Tex., Feb. 10.—Indication of new oil or gas production in Bee County, field extensions in Duval, Nueces and Webb Counties, and a general gain in proven field development shown by increased staking of new locations featured the week's activity in Southwest Texas. Wildcatting continued evenly throughout the area, with revived operations showing in the Rio Grande Valley and Duval County. Duval, Webb and Nueces Counties continued to lead in field activity. The new Taft field of San Patricio County received its second setback, and operations in the Fault Line zone with the exception of Frio County were quieter.

Attention was directed to the George M. Church No. 1 Webb-Hearn located southeast of Beeville and 2,000 feet east of the No. 1 Woods, which was completed as a large gasser last September. The Webb-Hearn well was perforated early in the week at 5,898-5,913 feet and at latest reports was still cleaning and flowing gas with some oil.

To the northeast, in Goliad County, the Diamond Half Oil Co. will drill a second test, offsetting the No. 1 Gillette, completed last week for new production at 3,707 feet. Proven field activity in this area centered in three fields of Bee and Karnes Counties. Dirks gained three new producers and Caesar one during the week.

Failure in Taft Field

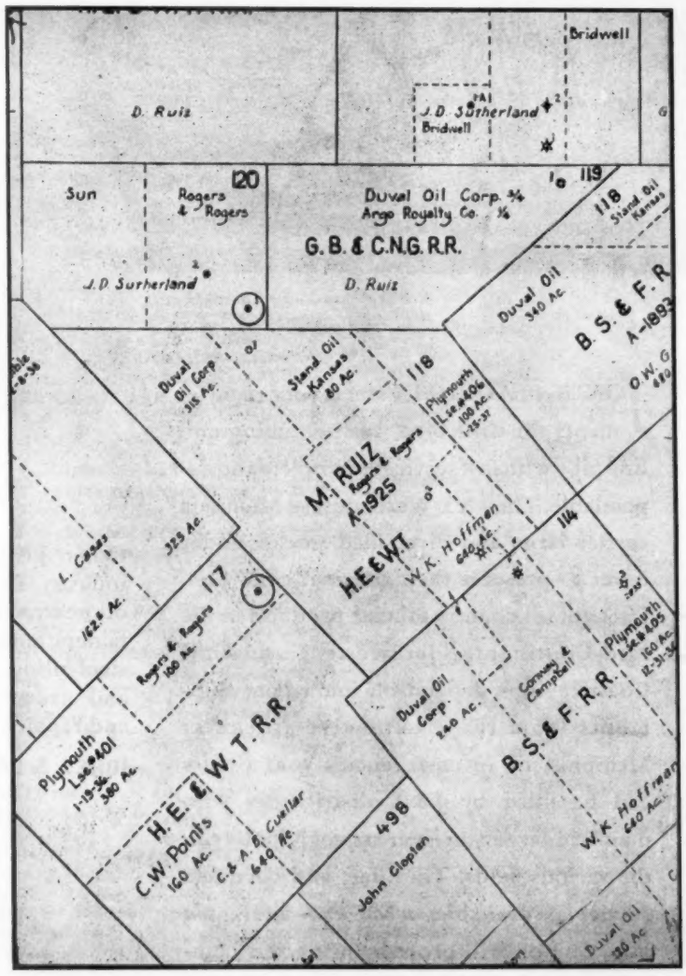
The second failure in the new Taft field loomed as Humble Oil & Refining Co. No. 1 Godwin, north offset to the single producer in the field, tested 1,700 feet of salt water in sand at 5,232-39 feet. The well previously found salt water at 4,900 feet, producing horizon of the Smith No. 1 Britton to the south. The west offset of this discovery well failed to get production at the same level and is shut down. Humble will move to a No. 2 location west of the company's first test in the field. The Plymouth field, 2 miles north of the Taft area, received three new producers during the week, and Conroe Drilling Co. No. 2-G Welder, west outpost test, was abandoned after failure in the Plymouth and Heep sands and small show in the third and deepest sand of the field. Three miles southwest of Sinton, Stanolind Oil & Gas Co. abandoned the No. 1 Alamo Iron Works wildcat at 6,675 feet with no shows.

Nueces Activity

Nueces County saw an extremely active week, with two completions in the Saxet field and three in the Saxet Heights field on the outskirts of Corpus Christi. The Saxet field is due for considerable further development as a result of 15 new locations staked, 9 of which were made by the Texon Royalty Co. A 1,000-foot south extension to this field was made by the Texon No. 2 McElroy, completed at 4,002 feet for approximately 500 bbls. per day initial production. The 4,002-foot sand is the seventh horizon opened in this prolific sand area. All other oil production in the field is from deeper pay.

Three new producers completed in the Saxet Heights field were: J. K. Culton No. 3 Whelan, Heep Oil Corp. No. 1 Robinson and Tom Graham No. 1 Kaler, constituting field extensions to the north and west. Located 4,400 feet southeast of the field, Clymore No. 1 Weil encountered dry sand at 4,115-20 feet and is coring on. Locations for seven new tests in this new field were announced during the week.

With drilling showing no signs of declining in the two major fields of Duval County, and development of the two latest discoveries pending shortly, that county will probably hold its place as most active in the state for some time in the future. During the week, the showing for production in Rogers & Rogers No. 1 Cuellar in addition to the recent completion of the same company's No. 1 Sutherland led to the staking of four new locations with two additional ones to be announced shortly. Difficulty in cementing off the lower sand again prevented completion of Rogers & Rogers No. 1 Cuellar, but completion of the well is expected next week. The accompanying map shows new locations of Rogers & Rogers, Duval Oil Corp. and Standard Oil of Kansas. To the north, in Survey 70, two other locations have been made by Yoakam & Gorman and C. C. Hamil.



The Hoffman area of Duval County where two strikes have been made by the Rogers & Rogers Drilling Co. Five locations have been made in the area, 5 miles south of the Loma Novia field

East of the Loma Novia field, Santa Clara Oil Co. (Atkins & O'Neil) No. 1-A Wood-Welder was placed on the pump. No new locations in this area have yet been announced. Acreage surrounding the test is held by Santa Clara and five major oil companies.

Loma Novia again led the district with nine new producers and 19 new locations announced. Most of the completions were made in the south portion of the field, with initial production ranging from 20 to 75 bbls. per hour. A majority of the new locations were made in the same general area, extending from Survey 84 on the southeast edge of the field to Survey 59 at the extreme southwest section.

Seven Sisters completions rose during the week, to equal those made in the Loma Novia field, with initial productions showing more consistently around 20 to 30 bbls. per hour. On the eastern edge of the field, Westheimer & Daube brought in the No. 3 Campos gauging an initial of 60 bbls. per hour on a half-inch choke. This latest producer from the Chernosky sand at 2,233 feet. This is an eastern offset to the No. 1 Campos producing from the same sand. A south offset of the No. 1 Campos was abandoned dry several weeks ago. Slight extensions to the field on the south and west accompanied the week's completions. Six new locations have been announced for the field.

The new shallow sand opened by Magnolia Petroleum Co. in the Piedra Lumbre field north of Government wells was producing 20,000,000 feet of gas as that company's No. 5 D.C. R.C. was completed during the week. The sand occurs at 1,324-31 feet. Oil production in the field is found at about 1,970 feet.

Seven wildcat tests are drilling in Duval County at the present time. One was abandoned in Survey 26 and a new one started in Survey 85. Intrepid Oil Co. No. 1 Parr was found dry at total depth of 5,305 feet. Porter & Blanchard are drilling on the No. 1 Milano Land & Garden Co., southeast of Loma Novia.

New Wells in Lopez

Four good producers were brought in adding production to the Lopez field of eastern Webb County. Double that number of new locations were made for new tests in the field. The Lopez field contains some of the largest undeveloped proven acreage in the Laredo district. O'Hern received its average of two producers.

Wildcat Failures

Webb County wildcatting received two setbacks during the week. O. W. Killam No. 1-A Ortiz was abandoned dry at a total depth of 2,318 feet. The test was located in Porcion 17, on the 73,000-acre lease north of Laredo. Exploration of the Mount Selman in

(Continued on Page 79)

Above: Typical J & L Seamless Pipe Stock at Memphis . . . . All Under Cover.

At Right: J & L Warehouse Barge Terminal on the Wolf River, Memphis.

Every sixth man in the J & L Seamless Tube Department is engaged in the work of inspection—making sure the product will meet your requirements. Analyzing, checking, verifying are based on your past experience, your present and future needs.

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Other J & L products for the petroleum industry include: steel for derricks and other structural purposes; tinplate for containers; tank barges; and bars, shapes, plates, steel piling, concrete reinforcing bars, wire and nails—for maintenance, construction and repairs.

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American Iron and Steel Works
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DRILL PIPE · CASING · TUBING · LINE PIPE

West and North Texas

By L. E. BREDBERG

SECOND ORDOVICIAN POOL IS PROVED IN WEST TEXAS AREA

FORT WORTH, Tex., Feb. 10.—Of prime importance to the West Texas district this week was the proving of its second Ordovician field. Gulf Production Co. No. 1 Waddell, section 4, Block B-27, in the Permian lime producing Tubbs or Sand Hills area of western Crane County, made an initial gauge of 122 bbls. of 34.7 degrees gravity in 24 hours on the pump. Total depth is 6,450 feet, but it was plugged back to 6,317 feet to shut off water and shoot, first with 440 quarts at 6,186-6,300 feet and then with a second shot of 140 quarts at 5,979-6,050 feet. It was cleaned out to 6,127 feet after shooting and before running rods and tubing. The Simpson, or middle Ordovician, from which the well is producing, has been reported topped at 5,875 feet with one report naming 5,980 feet, definite information on tops of these deep formations having been withheld by the operating company. This deep producer opens the first Ordovician production outside of the Big Lake field, Reagan County, discovered in 1929.

Gulf Production Co. is expected to drill a second Ordovician test on one of its short-term leases in the Tubbs area, probably east of this discovery. Some think tests west of this strike, even as far as the Grand Falls and O'Brien fields in the Ward and Winkler County areas, have good chances for deep production as this discovery is much shallower than the deep producing wells in Big Lake, and the formation is rising to the west.

Glasscock Deep Test

The deep test of John I. Moore, Loffland Brothers and others on the L. S. McDowell ranch, section 22, block 34, Township 23, T.&P. Survey, Glasscock County, is below 10,590 feet in brown lime with no showings of consequence logged below 10,115 feet where it was shut down for several months, and where it made a couple of flows from the Pennsylvanian. The Ellenberger lime of the Ordovician has been picked by some at 10,385 feet, others at 10,455 feet and still others believing it still had not been touched. It is one-half mile west of the small Permian lime producing pool on the ranch. Elevation is 2,534 feet.

Schleicher Deep Completion

The Pennsylvanian producer of John M. Cooper and others on the Pert Page ranch, in section 40, Block L, G.H.&S.A. Survey, southeast of Eldorado in Schleicher County, was completed producing from 10 to 12 bbls. of oil with 11,000,000 feet of gas. This test was drilled to 6,257 feet but was plugged back to 5,540 feet, shot with 270 quarts from 5,400 to 5,535 feet, acidized with 3,000 gallons at 5,555 feet and later with a second dose of 8,000 gallons under a 150-bbl. load at the same depth. The gas was logged from 5,404-5,553 feet and the oil from 5,505-07 feet. Elevation is 2,270 feet.

This is not much of a producer, but due to being in extreme wildcat territory, the first Pennsylvanian producer in the district and making a little oil with the gas, it substantiates the belief that a heavier reservoir of oil or gas, or both, is in this area, and other deep tests will be drilled. Two such tests are now drilling.

The owner has been negotiating with the city councils at Sonora and Eldorado for gas franchises and contemplates laying pipe lines and distribution systems.

An interesting wildcat was staked in the NE cor. section 12, Block B-22, about 4 miles west of the Waddell field and in the extreme northern part of Crane County, about due south of the Penn pool in Ector County. Clark and others made the location on the A. P. Jordan ranch.

Dodge-Denman Definer

The Dodge-Denman pool in eastern Howard County, has apparently been defined on the west by a dry hole. Bond Drilling Co. No. 1 Rhotan, SE cor. section 5, Block 30, Township 1s, T.&P. Survey, was abandoned at total depth of 3,123 feet after striking sulfur water at 3,097 feet. Elevation is 2,434 feet.

Extension to Sayre Pool

The Sayre pool in northern Winkler County was extended a half mile north when Amerada Petroleum Corp. No. 1-A Walton, SE cor. section 35, Block 74, came in making 426 bbls. in 24 hours at total depth of 2,874 feet after logging pay at 2,825-30 feet. This test brings the Sayre-Howe field nearer the Scarborough pool about 3 miles north and a little east. One test is drilling one-half mile west of the Amerada extension and Wahlenmaier is drilling one a mile east.

Jones County

A new pay sand was reported logged and producing in the Hawley pool, Jones County. Thomas B. Humphrey No. 3 Dorsey estate, on the eastern edge, in section 18, Manuel Bueno Survey No. 196, topped the sand at 2,206 feet and was shut down at 2,208 feet, getting a sandy shale showing oil from 2,165-68 feet and a saturated lime at 1,940-52 feet. It is said to be producing from the two deeper sands and is the best well completed in the field, gauging 1,168 bbls. of 43.8 gravity in eight hours. It offsets to the east a dry hole drilled to 2,187 feet.

Fain-McGaha Oil Corp. has assembled a 600-acre block centering in the SW quarter section 2, Block 15, T.&P. Survey, on the highway between Hawley and Anson and will spud a test within 90 days. Condor Petroleum Co. and Ungren and Frazier are getting estimates on equipment for repressuring plants in the Hawley and Condor pools.

Wichita Falls and Ranger

The Durocher pool, 10 miles southeast of Ranger in Eastland County, was extended 2,000 feet north and 4,000 feet west when F. J. Estes and others No. 1 J. A. Gentry logged the sand at 3,045-94 feet and was estimated good for 100 bbls. flowing. It will be shot.

A. A. Wisdom and Ed Parsons and others have a discovery in the making 6 miles south of Cisco in Eastland County, on the G. E. Wende farm, section 62, Block 3, H.&T.C. Survey. It had 2,500 feet of oil in the hole while shut down at 3,236 feet, but is being drilled deeper.

The second test on the De LaFosse ranch on the east edge of Shackelford County logged sulfur water in the Ellenberger and is to be plugged at 4,540 feet. First water was encountered at 4,494 feet. It is 8 miles east of Albany in section 1,559, T.E.&L. Survey, a north offset to No. 1 De La Fosse in section 1,549, drilled last year by Pitzer and West, who are drilling this second test, Humble Oil & Refining Co. having purchased a half interest in the block of 5,500 acres after the showing of the first well.

There were 28 locations staked in the Wichita Falls district with 27 tests completed.

Grayson County

Herbert G. Terry is assembling a 3,200-acre block in the J. Barefoot Survey No. 90, 6 miles northeast of Whitesboro in Grayson County and contemplates a 2,500-foot cable tool test within 90 days in an area where shallow showings of heavy oil have been struck. This will make the third test in the county, the most interesting being that of Olson Drilling Co. on Southwestern Life Insurance lands in the J. C. Jamison Survey 4 miles northwest of Denison, which is below 3,600 feet and is scheduled for a deep test.

McCarty Oil Co. has asked the Railroad Commission for permit to flood a 150-acre lease in Wichita County, an experiment now being tried in the Fry Pool in Brown County by Texas Co. If the experiment proves successful many operators may flood their leases, probably pooling groups. There are 6,250 producing wells in Wichita County, only eight of which flow by their own pressure.

The district produced a daily average of 62,350 bbls. during the week.

PANHANDLE COMPLETIONS

Carson County

Magnolia Petroleum Co. No. 15 fee No. 244, top pay 2,928 feet, total depth 3,022 feet, shot, initial production 438 bbls. pumping.

Gray County

Bell Oil & Gas Co. No. 1 Furneaux, top pay 3,015 feet, total depth 3,262 feet, initial production 62 bbls. pumping. Christie and Hickman No. 1 Gethings, top pay 2,638 feet, total depth 2,715 feet, shot, initial production 628 bbls. pumping. Empire Gas & Fuel Co. No. 10 Culler, top pay 3,145 feet, total depth 3,240 feet, shot, initial production 682 bbls. pumping; No. 3 Cunningham, top pay 3,230 feet, total depth 3,307 feet, shot, initial production 485 bbls. pumping.

Hutchinson County

Harvester Oil Corp. No. 2 Haile, top pay 3,028 feet, total depth 3,077 feet, shot, initial production 774 bbls. pumping. Phillips Petroleum Co. No. 2 Ponter, top pay 2,975 feet, total depth 3,050 feet, shot, initial production 556 bbls. pumping.

Moore County

Anderson & Kerr Petroleum Co. No. 1 Flynn, top pay 2,960 feet, total depth 3,320 feet, shot, initial production 14,012,000 feet of gas. Texoma Natural Gas Co. No. 7-P Sneed, top pay 2,565 feet, total depth 3,173 feet, initial production 49,785,000 feet of gas.

Wheeler County

Royal Oil & Gas Co. No. 25 Keller, top pay 2,450 feet, total depth 2,532 feet, initial production 2,659 bbls.

WEST TEXAS COMPLETIONS

Crane County

Continental Oil Co. No. 3-B Cowden, top pay 2,336 feet, total depth 2,452 feet, shot and acidized, initial production 426 bbls. pumping.

Ector County

Eppenauer Drilling Co. No. 1 Texas Pacific Land & Trust Co., top pay 4,103 feet, total depth 4,268 feet, shot, initial production 640 bbls.

Irion County

Lowe and others No. 7 Nutt, dry and abandoned 1,540 feet.

Jones County

Ungren & Frazier No. 1-C Dorsey, top pay 2,035 feet, total depth 2,066 feet, initial production 114 bbls.

Kimble County

Forrest Development Co. No. 1 Stapp, dry and abandoned 4,090 feet, elevation 1,975 feet.

Howard County

American Maracaibo Oil Co. No. 6-A Settles, top pay 2,380 feet, total depth 2,424 feet, acidized, initial production 54 bbls. pumping. McLaughlin & Co. No. 1 Chalk, total depth 2,976 feet, initial production 246 bbls. pumping. Sinclair Prairie Oil Co. No.

(Continued on Page 54)

TALCO, TITUS COUNTY, TEST STARTING EAST TEXAS PLAY

By L. E. BREDBERG

DALLAS, Tex., Feb. 10.—Another play has struck the East Texas district, this time in the northeastern section, having its center near the town of Talco, Titus County, and radiating in all directions from a test 1½ miles east of that town, but more especially from the southwest and west to the east and northeast along a fault plane which Peveto and others No. 1 C. M. Carr, in the M. V. Delgado Survey, cuts. This test is just north and on the downthrow side of the fault oriented on the Georgetown lime which the Carr test topped at 3,960 feet.

R. L. Peveto, C. N. Housh and E. G. Thompson are drilling this test which was in quest of Trinity sand production, contract depth being 6,200 feet.

The Carr test showed 150 feet more section from the top of the Pecan Gap chalk to the Georgetown than the Flannigan-McGill test, approximately 300 feet of the Washita-Fredericksburg section being eliminated by the fault in the Carr test.

A 25-minute drill stem test was made at 4,166-4,208 feet, the hole showing 800 feet of pipe line oil testing 27 gravity, although later tests reported it from 5 to 7 degrees higher. First reports were that 6 or 8 inches of well saturated Paluxy sand, upper member of the Trinity, had been cored from 4,205-08 feet, but later reports stated the first oil appeared on the slush pit at 4,205 feet while drilling and it was cored from there to the bottom, 4,208 feet, and the drill stem test then made. As the drill stem was being broken down the hole carried sufficient gas to blow part of the oil at least 40 feet into the air. It is believed at least 20 feet of saturated sand has been drilled, the operators themselves not knowing just when it was topped and how much has been drilled, although all of the section might not have been sand, some shale or other streaks possibly being cut in the section. Seven-inch casing will be run and a test made to determine the potentiality of the formation, which if it produces, will mark another producing sand horizon in the East Texas district. This fact, coupled with the prospect of more pools being found in the north end of the Woodbine sand belt, has led independents and majors to flock to the scene. Shell Petroleum Corp. has recently purchased several hundred acres near the Titus County test, along the fault line and across the county lines into Franklin and Hopkins Counties, with other companies doing likewise.

The test is in the extreme northwest corner of the county, approximately 60 miles north and west of the East Texas field's north end in Upshur County. The play is now following the fault line shown, but will extend to the north and south of it in the four adjacent counties.

TOPS ON IMPORTANT MARKERS

	Peveto et al No. 1 Carr (feet)	Flannigan No. 1 McGill (feet)	Peveto et al No. 1 Crawford (feet)	Magnolia No. 1 Antoine (feet)
Elevation	370	375	360	390
Pecan Gap chalk	1,611	1,730	1,292–1,465	1,375–1,700
Austin	3,030	2,855	2,405–2,710	....
Woodbine	3,436	3,540	3,040	3,170
Georgetown	3,960	....	....	....
Washita	....	3,505	....	....
Paluxy	4,205–08	4,812	....	....
Total depth	4,208	7,193	3,422	3,238

A map drawn by Claude Dally, consulting geologist of Fort Worth, published on page 11 of the February 6 issue of The Oil and Gas Journal, shows the counties in this area, with boundaries of outcrops of Cretaceous and Tertiary formations and the fault on which the Carr test is located.

The test which the Mid-West Petroleum Co. and Texas Oil & Royalty Co. are preparing to drill on a 5,000-acre block assembled by R. H. Manning southeast of Box Elder in Red River County, is about 6 or 7 miles east and north of the Carr strike and located immediately on the fault cut by No. 1 Carr. A 3,100-foot Woodbine sand test was to be drilled on the Hocker and Hughes lands in the M.E.P.&P. Survey by Mid-West and Texas Oil & Royalty Co., but since the deep strike by the Carr test these companies may decide to carry their test to the Trinity.

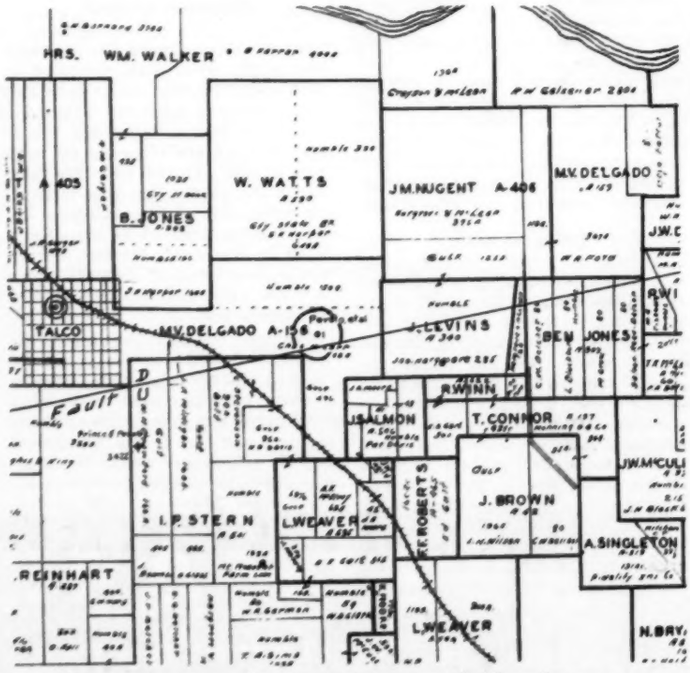
Another interesting test in this part of the district is being drilled by C. M. Joiner on the D. Rust lands in the C. C. Wilborn Survey, about 5 miles south of the test on the Hocker and Hughes lands in Red River County. The Joiner test is slated to go to the Trinity sand.

The test about 6 miles southeast of Talco being drilled by C. M. Joiner on the Lillianstern tract in the W. H. Crawford Survey, Titus County, is on a 5,000-acre block and probably will be drilled in quest of Trinity sand production. It is approximately 5 miles southeast of the Carr test. Elevation is 301 feet.

Derrick is up on the Huernich heirs estate lands in the W. G. Banks Survey, same county. C. M. Joiner is also to drill this test. It is on a 12,000-acre block and is to go to the Trinity.

Northeast Texas Abandonments

Lamar County in the northern part of the East Texas district had discouragement in two dry holes. One was drilled by the North Texas Syndicate on the Wright lands in the Alfred Moore Survey, 7 miles northwest of Paris, and the other by Texas Gulf Production Co. on the Darnell lands in the H. L. Williams Survey 4 miles northeast of Paris. The former was given up at 2,702 feet with an elevation of 460 feet. The latter went to 2,620 feet, topping the Georgetown at 1,365 feet and the Woodbine at 928 feet.



Showing location of test promising new field and new pay

(Map courtesy Zingery Oil Map Co., Fort Worth, Tex.)

Trinity Sand Test

A Trinity sand test on the opposite end of the Woodbine sand district is to be drilled in Henderson County by William McDougald and others. Derrick is being moved on location on the Gallemore Lake farm 5 miles southwest of Malakoff. The operator has a 2,500-acre block. The first Trinity sand producer was recently completed in the Cayuga field in northwest Anderson County, about 8 miles southwest.

East Texas Field

A new report compiled by the engineering department of the Railroad Commission at Kilgore gives the status of wells producing salt water and the percentage of water produced in the East Texas field. The report is not considered absolutely complete and additions are to be made as more data is obtained. However, a total of 1,410 wells is shown producing various percentages of water, from a fraction of 1 per cent or a trace up to 98 per cent. Many wells have been plugged back to eliminate or cut down the water volume, the majority being in the Henderson, Overton and Kilgore areas. This area also shows the greatest number of pumpers. Fifty-five wells are not able to make their allowables, although there are possibly many more, operators making up the difference from other wells. The 1,410 water wells are 7.7 per cent of the total number of oil producers, which may be considered low in view of oil taken and the vast number of producers.

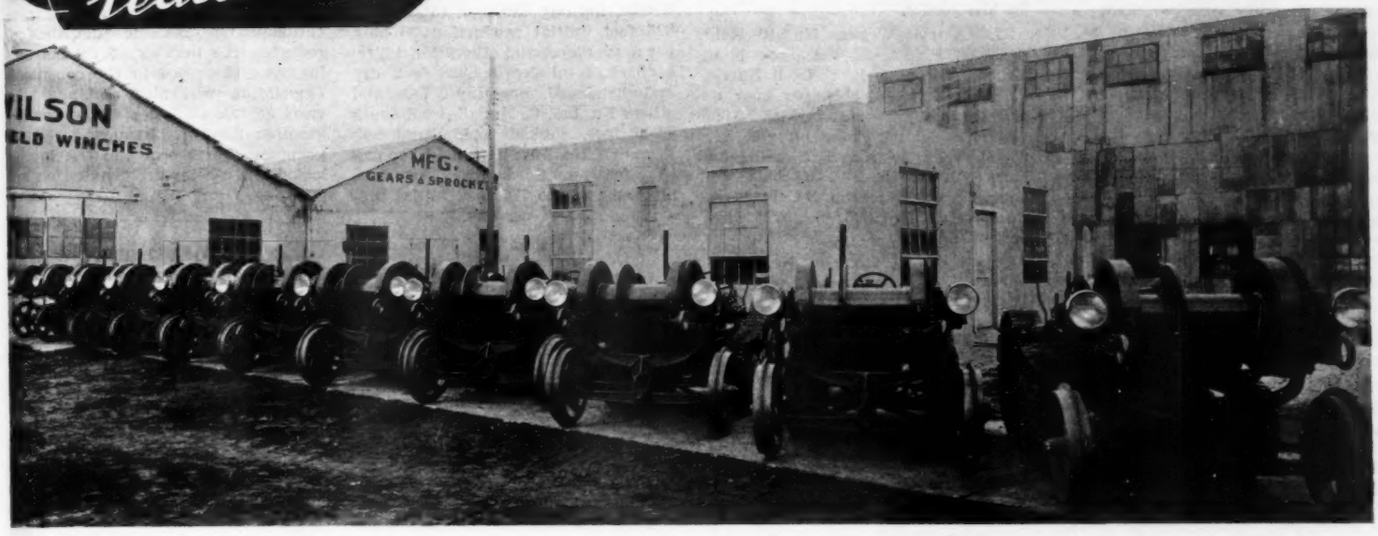
Purchase

Atlantic Oil Producing Co. added another to its long list of purchases this week when it took over a half interest in the A. Boyd 13-acre tract in the G. W. Hooper Survey, Gregg County, with five wells. J. O. Whittington was the seller. The company also obtained pipe line connections from Mr. Whittington on eight wells on his J. C. Bumpass 31.65-acre lease in the William Castleberry Survey, same county. The company also purchased a 9.3-acre lease in the William Painter Survey, Gregg County, from J. M. Noble, A. E. Morgan and E. E. Westervelt.

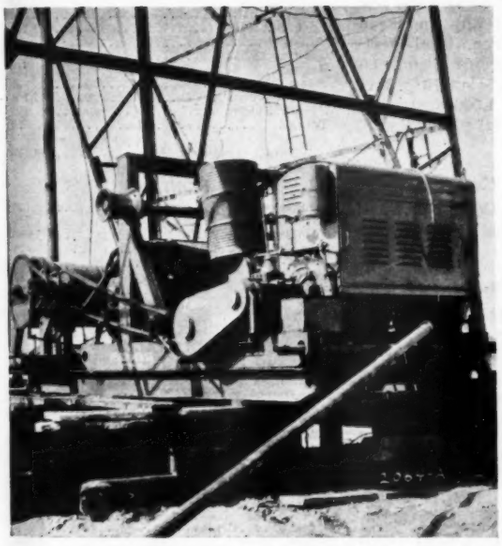
During the week there were two failures on the west side of the field. A test drilled on the M. Wilson farm in Smith County, was dry at a total depth of 3,785 feet and one on the Stubblefield farm in Cherokee County, on the southwest edge, tested salt

More Evidence of Wilson Leadership!

Argentine Government *Buys 4 Car-Loads of* WILSON WINCHES



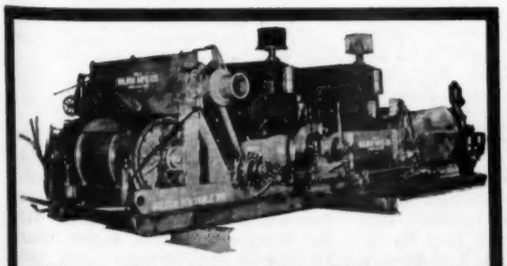
Senior Model Wilson Winches Mounted on English Model Fordson Tractors ready for shipment to Argentine Government.



Wilson Free-Rolling Drum Motor Winch in use by the Victory Swabbing Company at Gladewater, Texas. This single-drum winch with separate unit Cable Tool Attachment, and built-in sand line drum, makes an ideal machine for drilling-in, cleaning-out or deepening wells to 7,000 feet.

WHEN a government buys oil field winches it isn't interested in experimenting—but it is interested in winches that have PROVED they can do the job better, faster, and at less cost! That's why the Argentine Government bought 4 carloads of Senior Model Wilson Winches —because they have EXTRA speed, power, and durability which reduces operating costs to a minimum. Rigid Specifications, close checking of details of construction by engineering departments, and checking back against performance records and maintenance costs of previously purchased machines of the same make. These and many other things are carefully checked before Governments buy winches! And when these details are carefully checked when considering the purchase of Winches or Portable Rigs, the decision is INVARIABLY WILSON!

WRITE TODAY for details and catalog of Winches, Rigs or Cable Tool Attachments, giving depth of wells, size of holes, size of pipe to be pulled; size, type and make of engines preferred, and whether skid, truck or tractor type is desired.



Wilson Portable Rigs Shipped to California-Arabian Standard Oil Co.

This shipment consisted of 5 Mogul Model, skid type rigs similar to above, having 2 WOK Waukesha engines with flame-proof exhaust system; Wilson Chain Drive Transmission with Master Clutch; and slush pump.

Wilson
MANUFACTURING COMPANY
WILSON PORTABLE RIGS AND OIL FIELD WINCHES

Manufactured and Distributed in the Mid-Continent By
WILSON MANUFACTURING COMPANY
WICHITA FALLS, TEXAS

Exclusive California, Rocky Mountain and Eastern States and Export Distributor:
OILWELL SUPPLY COMPANY
NEW YORK — DALLAS — LONDON

water and is to be plugged at 3,645 feet, total depth.

Locations and Completions

There were 60 locations staked this week and 48 completed, 1 of which was junked and abandoned, 1 ordered plugged because of salt water in bottom of hole and another ordered abandoned at 960 feet. Three were completed on gas-lift, two swabbing and four on the pump, one of which was shot with 60 quarts to make an initial of only 4 bbls. per hour. Another was shot with 20 quarts to make a swabber of only 50 bbls. in six hours. This test was drilled by Magnolia Petroleum Co. on the Nadine Utzman farm, northeast of Kilgore in Gregg County.

George Culver of Gladewater (Solvex Pipe Line Co.) has purchased the Peckham Drilling Co. leases in western Gregg County, including 20 wells with a daily allowable of 440 bbls., which gives Solvex a total of 223 wells having a daily allowable of 4,746 bbls.

Trinity Test East of Field

Eastern Texas Oil Co., of Houston, headed by D. F. Miller, is reported moving in to drill an 8,000-foot Trinity sand test at the common corners of Rusk, Gregg and Harrison Counties, east of the East Texas field and about 45 miles southwest of the Rodessa extension in Cass County. This is considered an elongation of the Rodessa trend.

EAST TEXAS COMPLETIONS

Completions in East Texas and East Central Texas with their top of sand record, total depth and initial production were as follows:

Gregg County

Arkansas Fuel No. 14-C F. K. Lathrop, 3,555-3,580 feet, 20 bbls. in 15 minutes. Simms-Stanolind No. 40-B Flewellen, 3,639-3,663 feet, 11 bbls. in 10 minutes; No. 13 Albright, 3,504-3,607 feet, 27 bbls. in 30 minutes. E. Constantine Refining Co. No. 1 J. S Elder, 3,490-3,505 feet, pump 10 bbls. per hour. Gulf Production No. 17 R. H. Still, 3,529-3,617 feet, 38 bbls. per hour. Harris Drilling Co. No. 1 F. Cole, total depth 2,750 feet in chalk, junked and abandoned.

Hunter-Rowe No. 8 C. L. Still, 3,548-3,575 feet, pumping 4 bbls. per hour, shot with 60 quarts 3,538-65 feet. Lee & Williams No. 4 J. Carter, 3,502-3,600 feet, 7 bbls. in 20 minutes. Magnolia Petroleum Co. No. 1 Nadine Utzman, 3,465-3,479 feet, swabbing 50 bbls. in six hours, shot with 20 quarts 3,464-72 feet. Midfield Oil Co. No. 1-B Benson, 3,740-3,741 feet, 21 bbls. in 15 minutes. Shell Petroleum No. 16 P. M. Bates, 3,540-3,581 feet, 33 bbls. in 30 minutes.

Sinclair Prairie No. 28 Andrews, 3,450-3,501 feet, 30 bbls. in 25 minutes; No. 40-A A. A. King, 3,473-3,510 feet, 25 bbls. in 15 minutes; No. 43-A A. A. King, 3,457-3,500 feet, 28 bbls. in 15 minutes; No. 46-A A. A. King, 3,476-3,510 feet, 25 bbls. in 15 minutes; No. 12-B A. A. King, 3,420-3,463 feet, 25 bbls. in 25 minutes; No. 14-B A. A. King, trustee No. 2, 3,455-3,503 feet, 60 bbls. per hour; No. 17-B A. A. King, trustee No. 3, 3,433-3,462 feet, 20 bbls. in 20 minutes; No. 18-B A. A. King, trustee No. 5, 3,436-3,471 feet, 20 bbls. in 15 minutes. Texas Co. No. 16 P. C. Walker, 3,563-3,585 feet, 20 bbls. in 40 minutes.

Rusk County

J. Beren and others No. 4-B Rosa Jones, 3,628-3,668 feet, pumping 5 bbls. per hour, shot with 20 quarts 3,600-20 feet, 40 quarts 3,605-43 feet. Hasting & Dodson No. 3 E. Florey, 3,623-3,624 feet, 15 bbls. in one hour. H. A. Pace and others No. 3 D. S. Willis, 3,686-3,688 feet, 15 bbls. in 15 minutes. Shell Petroleum Corp. No. 19 W. P. Moore, 3,701-3,714 feet, 30 bbls. in 30 minutes. Nick Barbare No. 2 Propes, 3,528-3,565 feet, pumping 75 bbls. daily.

Gant-Garvin-Wegner No. 10 Hale, 3,627-3,636 feet, 26 bbls. per hour, 2-inch tubing gas lift; No. 6 Harris, 3,636-3,665 feet, 8 bbls. per hour on gas lift; No. 11 Harris, 3,600-3,657 feet, 5 bbls. per hour on gas lift. O. H. Grissom No. 1 Cunningham heirs, 3,804-3,810 feet, 60 bbls. per hour. W. B. Hamilton No. 14 L. A. Gambrell, 3,661-3,665 feet, 225 bbls. in two hours.

Humble Oil & Refining No. 51 W.

(Continued on Page 65)

West Texas Fields

(Continued from Page 51)

27 Dodge, total depth 2,800 feet, initial production 536 bbls. pumping. Bond Drilling Co. No. 1 Rhotan, dry and abandoned 3,123 feet, elevation 2,434 feet.

Loving County

Sinclair Prairie Oil Co. No. 3-C Wheat, top pay 4,344 feet, total depth 4,353 feet, shot, initial production 238 bbls. per day.

Pecos County

Phillips Petroleum Co. No. 7 Monroe, top pay 1,338 feet, total depth 1,350 feet, acidized, initial production 52 bbls. in six hours through 2-inch tubing. Stanolind and Continental Oil Co. No. 19 Yates, top pay 1,335 feet, total depth 1,416 feet, initial production 402 bbls. in 12 hours.

Schleicher County

Cooper and others No. 1 Page, total depth 6,257 feet, plugged back to 5,540 feet, gas pay 5,404-5,553 feet, oil pay 5,505-07 feet, shot 270 quarts from 5,400-5,535 feet, 3,000 gallons acid at 5,555 feet, 8,000 gallons acid under 150-bbl. load at 5,555 feet, initial production 10 to 12 bbls. oil per day and 11,000,000 feet gas, elevation 2,270 feet.

Upton Wildcat

Gulf Production Co. No. 124 McElroy, top pay 2,771 feet, total depth 2,944 feet, plugged back to 2,294 feet, shot, initial production 338 bbls.

Winkler County

Mid-Continent Petroleum Corp. No. 5-B Howe, top pay 2,800 feet, total depth 3,000 feet, shot, initial production 817 bbls. per day.

WICHITA FALLS (North Texas) COMPLETIONS

Archer County

Brown Farm Oil Co. No. 5 Parrish, top pay 1,285 feet, total depth 1,294 feet, initial production 11 bbls. per day. L. T. Burns No. 15 Turbeville, top pay 1,512 feet, total depth 1,515 feet, initial production 20 bbls. per day. Cable Oil Co. No. 7 Webb, top pay 674 feet, total depth 699 feet, initial production 25 bbls. per day. Wayne King and others No. 1 J. B. Frerich, total depth 1,226 feet, dry and abandoned; No. 1 R. J. Kelly, total depth 1,490 feet, dry and abandoned. Perkins and Cullum No. 212 Falls, top pay 1,136 feet, total depth 1,150 feet, initial production 31 bbls. per day. Petroleum Producers No. 14-D J. T. Richardson, top pay 1,245 feet, total depth 1,265 feet, initial production 84 bbls. per day. White and Duncan No. 4-B Webb, total depth 717 feet, dry and abandoned.

Cooke County

F. W. Merrick Drilling Co. No. 19 Knabe, top pay 789 feet, total depth 825 feet, initial production 20 bbls. per day. Pierce and others No. 4 Trubenbach, total depth 1,328 feet, dry and abandoned. Sun Ray Oil Co. and others No. 1 A. C. McCall, total depth 3,206 feet, junked and abandoned. Texas Co. No. 7 Walterscheid, top pay 751 feet, total depth 1,216 feet, plugged back to 777 feet, initial production 12 bbls. per day.

Jack County

Aaron Cohen and others No. 3 First State Bank, top pay 2,346 feet, total depth 2,355 feet, initial production 35 bbls. per day. Simpson and Browning No. 1 R. H. Ball, total depth 759 feet, dry and abandoned.

Montague County

Perkins and Cullum No. 2 Rowland, top pay 853 feet, total depth 880 feet, initial production 3 bbls. oil and 12½ bbls. water per day. Golding and Cochran No. 22-C Waggoner Brothers, total depth 1,896 feet, dry and abandoned. Ray and Staniforth No. 1 Robinson, total depth 1,838 feet, junked and abandoned. Waggoner Refining Co. No. 3-AA Waggoner, top pay 1,566 feet, total depth 1,575 feet, initial production 83 bbls. per day.

Wilbarger County

Fain McGaha Oil Corp. No. 1-MM Waggoner, total depth 2,400 feet, dry and abandoned.

Young County

R. Clampitt and others No. 2 W. W. Farmer, top pay 751 feet, total depth 756 feet, initial production 15 bbls. per day. Clark and Stilley No. 4 O. S. Perkins, top pay 733 feet, total depth 745 feet, initial production 50 bbls. per day. H. J. Cox and others No. 1 W. A. Corbett, top pay 4,319 feet, total depth 4,345 feet, initial production 10 bbls. per day. Duncan and others No. 1 S. M. J. Benson, top pay 895 feet, total depth 906 feet, initial production 65 bbls. per day. Fresno Oil Co. No. 11 M. Kirkland, total depth 713 feet, dry and abandoned. McDaniel and Page No. 2 O. S. Perkins, top pay 734 feet, total depth 742½ feet, initial production 25 bbls. per day. Rathke Oil Co. No. 11 Graham, top pay 904 feet, total depth 909 feet, initial production 75 bbls. per day. E. C. Reed No. 1 C. M. Rickman, total depth 741 feet, dry and abandoned.

Pacific Coast District

The Pacific Coast district of the American Petroleum Institute division of production will hold its annual spring meeting in Los Angeles, Calif., Tuesday, April 14, it is announced by Bruce Barkis, Rio Grande Oil Co., district chairman. Two technical sessions will be held, the morning session being devoted to production practice, and the afternoon to drilling practice. The chairman of the program committee, W. C. Whaley, of the Barnsdall Oil Co., is seeking suggestions for technical papers to be presented.

Saskatchewan Gasoline

REGINA, Saskatchewan, Feb. 8.—The Saskatchewan legislature will be asked during the present session to sanction legislation governing the sale of gasoline. The legislation will be along the line of that in force in Nova Scotia, providing for licensing of service stations, with a view to rationalizing gasoline distribution, reducing the number of outlets and lowering the price to the consumer. Legislation will also eliminate the gasoline tax of 7 cents a gallon on gasoline used by farmers for farm purposes. At present the tax is collected but rebates are granted on application.

Rocky Mountain Runs

Production estimates for week ending February 8, 1936:

WYOMING

	Bbls.
Salt Creek	16,370
Big Muddy	1,570
Badger Basin	40
Byron	100
Dallas Derby	420
Dutton Creek	70
Elk Basin	690
Ferris	30
Frannie	770
Grass Creek	2,240
Hamilton Dome	1,520
Hudson	340
LaBarge	1,080
Lance Creek	2,920
Lost Soldier	1,300
Midway	60
Oregon Basin	2,590
Osage	650
Pilot Butte	30
Rock River	2,100
Poison Spider	100
Teapot	20
Total Wyoming	34,910

MONTANA

Buckley-Border	220
Cat Creek	730
Cut Bank	7,900
Dry Creek	20
Kevin-Sunburst	2,800
Lake Basin	50
Pondera	1,100
Total Montana	13,820

COLORADO

Florence	180
Ft. Collins and Wellington	390
Iles Dome	2,630
Moffat	430
Orchard	60
Rangely	70
Tow Creek	180
Total Colorado	3,920

NEW MEXICO

Artesia	630
Cooper Area	8,500
Eunice Area	12,170
Hobbs	26,820
Hogback	200
Jal	3,490
Lea Area	890
Maljamar	1,760
Monument	1,800
Rattlesnake	880
Table Mesa	80
Total New Mexico	57,150
Total Rocky Mountain region	109,810

Michigan Fields

(Continued from Page 48)

Logan Township, Mason County, reported a show in the Dundee at 2,525 feet but was to be drilled deeper.

McClanahan Oil Co. No. 1 White-Pearson, NW NW SW section 4-31n-5w, Warner Township, Antrim County, one of the farthest north tests in western Michigan, failed to produce or show and was abandoned. Sun Oil Co. No. 1 William E. Woodward, SW SE SE section 24-19n-3w, Hamilton Township, Clare County, was abandoned as dry at 4,525 feet after topping the Dundee at 3,790 feet and testing the Monroe.

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Owensboro

LOUISIANA
Lake Charles

MONTANA
Billings
Cut Bank
Great Falls
Lewistown
Shelby
Winnett

NEW MEXICO
Artesia
Farmington
Gallup
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Wichita Falls

WYOMING
Casper
Glenrock
Greyball
Lovell
Lusk
Medicine Bow
Rawlins
Thermopolis
Worland

Rocky Mountain Area

By
T. R. INGRAM

ROCKY MOUNTAIN FIELDS HIT SERIOUSLY BY BAD WEATHER

DENVER, Colo., Feb. 10.—Drilling operations in the Rocky Mountain area have been slowed up by the extreme cold weather. All drilling wells in the Kevin-Sunburst field in Montana are at a standstill and few of the wildcats are making any progress.

There were no completions or new operations reported in Colorado.

The Montana-Wyoming gas well in the Garland district, Wyoming, is trying to kill gas in sub-zero weather. W. S. Gilbert No. 1 Zaring, Lamb structure, was abandoned. General Petroleum Corp.'s No. 1 Whitford, Carbon County wildcat, is plugging back from 6,482 feet. California Co. may drill a wildcat on the Wallace Creek structure in Natrona County. One small well was abandoned in Uinta County.

Santa Rita Oil Co. No. 1 Lander, the biggest well in the Cut Bank field, Montana, flowed 738 bbls. on last gauge reported. Two offsets have been spotted.

NEW MEXICO

In the Eunice field in Lea County, New Mexico, Empire Gas & Fuel Co. No. 1 S. E. Felton, C NE NW section 28-21-36, was completed at total depth of 3,900 feet and flowed 504 bbls. of oil through tubing and produced 4,500,000 feet of gas in 24 hours after acidizing and a shot. Same operators No. 3 State-D, C NE NE section 32-21-36, total depth 3,901 feet, flowed 7,944 bbls. through casing, natural, in the first 24 hours, with drill pipe in the hole, produced 20,000,000 feet of gas and was completed.

Humble Oil & Refining Co. No. 7 State-B, C NE SE section 29-21-36, total depth 3,900 feet, flowed 1,536 bbls. of oil natural through choke on tubing, and was completed; gas gauged 1,032,000 feet.

Texas Co. No. 1 J. M. Dean, C SE SW section 28-22-36, failed to respond after acidizing and was dry and abandoned at 3,922 feet, total depth.

In Eddy County there was one completion. R. D. Compton No. 7 Brainard, 200 feet from south and 1,120 feet from the east lines of section 5-18-27, was bottomed at 1,263 feet, pumped 15 bbls. of oil naturally in 24 hours and was completed.

Fred Brainerd No. 1 Featherstone, CEL SW SW section 36-16-28e, was dry and abandoned at 1,880 feet, total depth.

Eunice Area

General Crude Oil Co. No. 1 State, C NW SW sec. 32-21-36.
T.D. 3,974 ft.; swbd. 40 bbls. of oil and 14 bbls. of wtr. per day preparing to pump.

Humble O. & R. Co. No. 2 Adkins, C SW SW sec. 10-21-36.
T.D. 3,910 ft.; P.B. to 3,866 ft.; flow 18⅝ bbls. fluid per hr., 40 per cent wtr.; to set packer at 3,850 ft.

Gulf Oil Corp. No. 2 North Bell-State, C SE NE sec. 6-21-36.
T.D. 3,885 ft. in lime; would not flow from below packer at 3,809 ft.; acidized, no test; resetting packer.

Gulf Oil Corp. No. 7 Bell-Ramsey, State, C SW NW sec. 4-21-36.
T.D. 4,217 ft.; to P.B. to 4,085 ft. and test.

Tide Water Oil Co. No. 1 State-D, C NW SE sec. 16-21-36.
Drlg. 3,696 ft.

Gulf Oil Corp. No. 1 A. L. Christmas, C SE SE sec. 27-22-36.
T.D. 3,214 ft.; W.O.C.

Devonian Oil Co. No. 2 State-Heasley, C NW SE sec. 5-21-36.
Drill stem test 3,725-40 ft., made 500,000 ft. gas; T.D. 3,745 ft.; W.O.C.

Humble O. & R. Co. No. 3 Adkins, C NE SW sec. 10-21-36.
Cellar and pits.

Gulf Oil Corp. No. 1 Janda-B, C NW SE sec. 32-21-36.
T.D. 1,573 ft.; W.O.C.

Ohio Oil Co. No. 1 State-Maxwell, C NE NW sec. 16-22-36.
T.D. 3,886 ft.; acidized and shot; flowing 150 bbls. a day with 750,000 ft. of gas; C.O. at 3,850 ft.

Ohio Oil Co. No. 4 State-McDonald, C SE SE sec. 16-22-36.
Drlg. 3,450 ft.

Barnsdall Oil Co. et al No. 1 Hardy, C SE NE sec. 29-21-37 (wildcat).
T.D. 3,194 ft., fishing for bit.

Continental Oil Co. No. 1-B-4 Meyer, C SE SW sec. 4-21-36.
Drlg. 3,031 ft.

Continental Oil Co. No. 2-B-4 Meyer, SW SW SE sec. 4-21-36.
Drlg. 3,605 ft.

Continental Oil Co. No. 3-B-4 Meyer, SE SE NE sec. 4-21-36.
Small show of oil and gas on drill stem test at 3,744-80 ft., T.D.; setting 5½-in. casing.

Continental Oil Co. No. 4-B-4 Meyer, C NE SW sec. 4-21-36.
Drlg. 3,600 ft.

Continental Oil Co. No. 1-B-28 Lockhart, C NW NW sec. 28-21-36.
T.D. 3,845 ft.; drlg. plug.

Continental Oil Co. No. 2-B-28 Lockhart, C SW NW sec. 28-21-36.
Drlg. 3,857 ft.

Gulf Oil Corp. No. 4 Orcutt, C NE NW sec. 5-21-36.
Drlg. 780 ft.

Gulf Oil Corp. No. 5 Orcutt, C SW SE sec. 5-21-36.
Drlg. 1,225 ft.

Gulf Oil Corp. No. 1 East Bell-State, C NW NW sec. 15-21-36.
Drlg. 2,125 ft.

Empire Gas & Fuel Co. No. 4 State-C, C SE SW sec. 16-21-36.
Drlg. 3,500 ft.

Getty Oil Co. No. 1 State-C, C SE NE sec. 16-21-36.
Drlg. 3,197 ft.

Skelly Oil Co. No. 1 King-B, C SW SE sec. 32-22-37.
Drlg. 2,220 ft.

Gulf Oil Corp. No. 1 Eunice-Graham-State, C SW SE sec. 6-21-36.
Rigging up rotary.

Continental Oil Co. No. 5-B Meyer, 2,200 ft. from S and 440 ft. from E lines of SE¼ sec. 4-21-36.
Drlg. 3,665 ft.

Humble O. & R. Co. No. 1 J. D. Knox, C NW SE sec. 19-21-36.
Rig, waiting on tools.

Gulf Oil Corp. No. 1 H. C. Collins, C SE NW sec. 14-21-36.
Rigging up rotary.

Tide Water Oil Co. No. 2 State-D, C SW SE sec. 16-21-36.
Drlg. 320 ft.

Gulf Oil Corp. No. 4 Arnott Ramsey-C, C SW NW sec. 21-21-36.
Drlg. 1,645 ft.

Empire Gas & Fuel Co. No. 2 Felton, C SE NW sec. 28-21-36.
Cellar and pits.

Devonian Oil Co. No. 3 State-Heasley, C NE NE sec. 5-21-36.
Location.

Amerada Pet. Corp. No. 3 Houston, C NW NE sec. 7-21-36.
Moving in material.

Continental Oil Co. No. 1-B-18 Meyer, C SE NW sec. 18-21-36.
Drlg. 1,405 ft.

Empire Gas & Fuel Co. No. 4 State-D, C NE NE sec. 32-21-36.
Moving in material.

Texas Pacific Coal & Oil Co. No. 1 State Acct. 2, C SE SW sec. 9-22-36.
Old well; T.D. 3,835 ft.; cleaning out to bottom; preparing to deepen.

Continental Oil Co. No. 6-B-4 Meyer, 330 ft. from S and 1,980 ft. from W lines of NW¼ sec. 4-21-36.
Cellar and pits (first report).

Continental Oil Co. No. 4-A-18 Lockhart, C SW SW sec. 18-21-36.
Location.

Continental Oil Co. No. 2-A-30 Lockhart, C NE NE sec. 30-21-36.
Old total depth 3,942 ft.; pulling tubing to deepen.

Gulf Oil Corp. No. 1 Arnott-Ramsey-D, C NW NW sec. 33-21-36.
Cellar and pits.

Lea County

Vierson & Brown No. 1 Robbins, C NW SE sec. 14-11-32.
Drlg. at 4,566 ft.

Hobbs Area

Continental Oil Co. No. 1-D-19 State, C NW SW sec. 19-19-37.
T.D. 3,845 ft.; W.O.C.

Continental Oil Co. No. 1-A-6 Britt, C SW SW sec. 6-20-37.
Drlg. 3,075 ft.

Barnsdall Oil Co. No. 2 Cooper, C NW NW sec. 7-20-37.
T.D. 3,790 ft.; drlg. plug.

Oilwell Drlg. Co. et al No. 1 Morris, SW SW SE sec. 21-18-38.
Drlg. 3,670 ft.

Gulf Oil Corp. No. 1 Steve Taylor, C SE NE sec. 24-18-38 (wildcat).
T.D. 4,883 ft.; P.B. to 4,596 ft.; will R.U. standard tools.

Shell Pet. Corp. No. 1 State-E, C W½ SE SE sec. 14-18-37.
T.D. 4,374 ft.; P.B. to 4,178 ft.; S.D.

Texas Co. No. 1 State-C, C SE SW sec. 19-19-37.
Drlg. 2,805 ft.

Gulf Oil Corp. No. 3 Culp, C SE NW sec. 19-19-37.
Drlg. 3,723 ft.

Amerada Pet. Corp. No. 1 State-K, C SE NW sec. 29-19-37.
T.D. 2,520 ft.; W.O.C.

Gulf Oil Corp. No. 1 Graham-State-A, C SW SE sec. 19-19-37.
T.D. 227 ft.; W.O.C.

Texas Co. No. 2 State-G, C SW SW sec. 19-19-37.
Rigging up.

Amerada Pet. Corp. No. 1 State-L, C SW NW sec. 20-19-37.
T.D. 195 ft.; W.O.C.

Gulf Oil Corp. No. 4 Culp, C SW NE sec. 19-19-37.
Building rig.

Gulf Oil Corp. No. 5 Culp, C SE NE sec. 19-19-37.
Cellar.

Anderson & Prichard Corp. No. 2 Britt, C NE NW sec. 7-20-37.
Rigging up rotary.

Ohio Oil Co. No. 1 State-Elliott, C NW SE sec. 30-19-37.
Cellar and pits.

Texas Co. No. 1 Phillips, NW NW NW sec. 6-20-37.
Cellar and pits.

Monument Area

Shell Pet. Corp. No. 1 State-C, C NE NE sec. 24-19-36.
T.D. 4,069 ft.; acidized with 20,000 gals.; swbd. and flowed 216 bbls. of oil in 24 hrs.; preparing to pump.

Amerada Pet. Corp. No. 1 Weir, C SW SW sec. 35-19-36.
Drlg. 3,945 ft. in lime; flowed 210 bbls. in 22 hrs.

Republic Production Co. No. 2 Shelby & Mavesty, C NE SW sec. 35-19-36.
T.D. 3,927 ft.; acidized and waiting.

Amerada Pet. Corp. No. 2 State-D, C SW NW sec. 1-20-36.
T.D. 3,915 ft.; flowed 302 bbls. in 24 hrs.; may acidize.

Texas Co. No. 3 State-E, C NW SW sec. 1-20-36.
T.D. 3,910 ft.; flowed 60 bbls. in 3 hrs.; running packer.

Gulf Oil Corp. No. 1 Graham State-B, C NW SE sec. 24-19-36.
T.D. 4,040 ft.; reacidized, heading into pits.

Sun Oil Co. No. 4 Weir, C NW SE sec. 35-19-36.
Drlg. 3,556 ft.

Shell Pet. Corp. No. 2 State-C, C NE NE sec. 24-19-36.
Drlg. 3,875 ft.

Amerada Pet. Corp. No. 1 Weir-A, C NW SW sec. 25-19-36.
Drlg. 1,292 ft.

Amerada Pet. Corp. No. 1 Phillips, NE NE NE sec. 1-20-36.
Drlg. 2,050 ft.

Gulf Oil Corp. No. 2 Graham-State, C NE SE sec. 2-20-36.
Drlg. 3,137 ft.

Texas Co. No. 2 State-F, C SE SE sec. 24-19-36.
Spudded.

Gulf Oil Corp. No. 2 Graham-State-B, C NW NE sec. 24-19-36.
Cellar.

Gulf Oil Corp. No. 1 Graham-State-D, SE SE SE sec. 36-19-36.
Location.

Cooper Area

Skelly Oil Co. No. 1 Harrison, C NW SW sec. 5-23-37.
T.D. 3,794 ft.; P.B. to 3,762 ft.; shot with 870 qts. at 3,490-3,762 ft.; flowed two 25-bbl. heads and "died"; cleaning out at 2,700 ft.

Gulf Oil Corp. No. 2 Cooper, C NW SE sec. 14-24-36.
T.D. 3,698 ft.; sulfur wtr.; P.B. to 3,550 ft.; setting packer at 3,468 ft.; to acidize.

Continental Oil Co. No. 2-A-15 Vaughan, 1,980 ft. E and 660 ft. S lines, sec. 15-24-36.
Location.

Skelly Oil Co. No. 1 Simms, C SW NE sec. 4-23-37.
Drlg. 3,663 ft.

General Crude Oil Co. No. 1 State-F, C SW SW sec. 2-24-36.
Drlg. 1,075 ft.

Amon Carter et al No. 1 Hair, C SW NW sec. 11-24-37.
T.D. 3,644 ft.; reaming; 500 ft. oil in hole.

Lea County—Miscellaneous

Harry Leonard No. 1 Justice, C SW NW NW sec. 20-25-37.
T.D. 3,501 ft.; P.B. to 2,970 ft.; S.D.

Harry Leonard No. 1 Leonard-Lanhart, C SW NE sec. 21-25-37.
T.D. 975 ft.; S.D.

Stanolind O. & G. Co. No. 29 Farnsworth, C SW NW sec. 18-26-37.
T.D. 510 ft.; W.O.C.

W. I. Todd et al No. 1 Lemon permit, C NW SW sec. 17-21-32.
Drlg. 880 ft.

Maljamar O. & G. Co. No. 6 Baisch, C NW SE sec. 21-17-32.
Drlg. 1,585 ft.

Vierson & Brown No. 1 Robbins, C NW SE sec. 14-11-32.
Drlg. 4,566 ft.

Shell Petroleum Corp. No. 1 State-Endure-D, C SE NW sec. 11-21-35.
Location.

Eddy County

Tex Patillo No. 2 Thompson, 300 ft. from N and E lines of sec. 1-20-28.
T.D. 510 ft.; hole junked; will skid rig.

Emperor Oil Co. No. 2 Puckett, C W½ NW NE sec. 24-17-31.
Drlg. 3,862 ft.; flowed 50 to 60 bbls. daily by heads.

Barnsdall Oil Co. No. 3 Dodd, C SE NE sec. 22-17-29.
S.D. 2,836 ft.

Etz Bros. No. 1 State, C SE SW sec. 16-17s-30e.
T.D. 3,320 ft. in lime; acidized and testing.

T. J. Haley et al No. 1 Rose, C NE NE sec. 28-24-37.
Drlg. 2,060 ft.

D. & B. Oil Co. No. 1 Jenkins, C NW SW NW sec. 20-17-30.
Drlg. 2,931 ft.

Etz Bros. No. 2 State, C NW SW sec. 16-17-30.
Rigging up machine.

Premier Pet. Corp. No. 2 Dexter-E, NW SW NE sec. 26-17-30.
Moving in material.

Chaves County

Tannehill No. 2 Campbell, C NE SE sec. 1-11-25.
Drlg. 690 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 1 Gallegas grant, SE SW NW sec. 19-11n-4e.
Drlg. 900 ft. gray and red shale.

Harding County

Khaay et al No. 1 De Baca, C sec. 19-20n-31e.
Running 8¼-in. at 847 ft.; 10-in. at 250 ft. (first report).

McKinley County

Seward et al No. 1 State, NE SE NE sec. 2-19n-9w.
S.D. 460 ft. for approval of bond; 6⅝-in. at 418 ft.
Seward et al No. 1 fee, C NW SE sec. 35-20n-9w.
Drlg. 130 ft. in shale (first report).
Forth & Hickerson No. 2 Santa Fe, NE NW NE sec. 29-20-9w.
Drlg. 285 ft. in shale.
Montrose Oil & Gas Co. No. 1 State, NE NE sec. 28-20n-9w.
T.D. 570 ft.; missed shallow sand; may plug.
S. Dysart et al No. 1 Bouton, E NW NE sec. 14-4n-10w.
Old well drilled deeper; resumed at 1,365 ft.

Quay County

Quay County Dev. Co. No. 1 Wallace, SW SW SE sec. 19-9n-33e.
S.D. 816 ft.; rainbows at 814 ft.; show of salt water at 775 ft.

Rio Arriba County

El Vado Structure Properties Co., Ltd., No. 1 Tierra Amarilla grant, NE sec. 26-3s-1e (unsurveyed).

San Juan County

Jack Amenda No. 3, SW NW SW sec. 25-30n-12w.
S.D. 920 ft. for orders.
Jack Amenda No. 4 fee, NW NE SW sec. 25-30n-12w.
Drlg. 250 ft.
J. F. Cross et al No. 1 Wilson, SW SW SE sec. 17-30-11w.
S.D. 810 ft.
Continental Oil Co. No. 50 Tribal, NW NW SW NE sec. 2-29n-19w.
Drlg. 450 ft. in shale.
Cross & Pool No. 1 Aztec, sec. 1-30-11w.
Making water shutoff at 740 ft.
Nick Spatter No. 1 fee, C NE SW sec. 32-31-11w.
Running 6⅝-in. at 1,780 ft.
Southern Union Gas Co. No. 5 Government, C NE NE sec. 14-28n-11w.
S.D. 805 ft. for engine repairs (first report).

Torrance County

41 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e.
Drlg. 1,350 ft.
Bruce Frazier No. 1 Fraier, SE sec. 12-2n-31e.
Drlg. 1,210 ft. in granite wash; water at 882-86 ft.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64.
T.D. 4,130 (cor. S.L.M.) ft.; 8¼-in. at 3,977 ft.; cemented caves below pipe; drlg. plug.
Riddle Pet. Co. No. 1 Baxter, C SW sec. 2-3s-6w.
S.D. 700 ft. for drill pipe.

Archuleta County

Wm. E. Hughes Est. No. 4 fee (unsurveyed), CSL SE SE sec. 24-33n-2e.
Drlg. 450 ft.
Wm. E. Hughes Est. No. 5 Gramps, NE SW sec. 24-33n-2e.
Ready to spud (first report).
Oil City Pet. Co. No. 1-A Garnett, NW NE NW sec. 25-33n-2e.
S.D. 1,515 ft.; top Dakota series 1,415 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Rath, 220 ft. N of S line, 220 ft. W of E line, Lot 4, sec. 24-33n-2e.
Rigged and waiting on orders.
K. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1e.
Drlg. 430 ft.; sulfur water in Dakota; Muddy dry.

Baca County

Paul Robb et al No. 1, NW NW NW sec. 24-32s-48w.
Derrick and pit, and water well rig.

Boulder County

Leslie R. Steele et al No. 1 Maxwell, SW NE NW sec. 24-1n-71e.
T.D. 2,420 ft.; plugged back to 1,160 ft. to test oil show in Muddy.

Cheyenne County

Brittle Oil Co. No. 1 Sipe, W½ sec. 26-12s-47.
Derrick.

Jefferson County

Rainbow Oil Co. No. 1 Johnson, NE sec. 30-4s-68.
Ruby Hill O. & G. Co. No. 1 Braden, SE cor. sec. 24-4n-69.
S.D. 4,385 ft.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w.
S.D. 1,300 ft. for 10-in.

Larimer County

California Co. No. 1 State, SE SW NE sec. 6-11n-68w.
S.D. 2,450 ft. on account of weather.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE sec. 7-17s-52.
Drlg. 1,850 ft.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60.
Drlg. 1,150 ft. in new hole.

WYOMING

Albany County

California Co. No. 3 Hoist, 1,650 ft. W of E line and 970 ft. N of S line, sec. 13-17n-77w.
Drlg. 1,640 ft.

Big Horn County

The crew of the Stock Oil Co., drilling Montana-Wyoming Oil Co. No. 1 Allen on the Garland Dome is encountering unusual difficulties in killing the well which was allowed to blow wild to prevent cratering, due to the extreme cold weather. The total depth is 3,835 feet and the gas, estimated at 60,000,000 feet a day, is coming from the Embar-Tensleep. The hole apparently went into a crevice which resulted in a blowout. The blowout preventer on the 12½-inch conductor pipe, cemented from the top to bottom at 412 feet, was opened when the well showed signs of cratering. The well was blowing mud, cavings and water from an upper horizon with the gas when the temperature plunged downward below zero. The result is what might be expected and some accompanying pictures show the effect of ice-coat on rig. The pictures were made by A. L. Webb, rotary driller on the Kinney-Coastal Oil Co. well and were obtained through the courtesy of J. A. Warren, field manager of that company. Operators have trucked in 17,000 pounds of baroid and are mixing mud preparatory to killing the well.

W. S. Gilbert No. 1 Zaring, SE cor. section 35-52-93, on the west end of the Lamb anticline, was plugged and abandoned at a total depth of 1,143 feet. It had water at 841-966 feet. The structure has been tested several times and at one time supplied Greybull and Basin with gas.

J. W. Bales No. 1 Parker, C SW SW sec. 23-4-89.
S.D. 690 ft. for pipe.
Peter Evanoff et al No. 1 McAllister, Lot 40, NW NE SE sec. 35n-97w.
Drlg. 2,350 ft.
Kinney-Coastal Oil Co. No. 3 Government, SW NW NE sec. 24-56n-98w.
Drlg. 4,120 ft. in hard Embar lime.
Ohio Oil Co. No. 4 Byron Union, SW SW NE sec. 22-56-97.
Drlg. 5,081 ft. in red beds.
Ohio Oil Co. No. 1 Lindsay, SW SW NE sec. 23-56-97w.
Drlg. 4,312 ft. in shale.
Montana-Wyoming Oil Co. No. 1 Allen, 270 ft. from N line, 936 ft. from E line, Lot 52 (SE NW SE) sec. 32-56n-97w.
T.D. 3,835 ft.; trying to kill gas.
Peay Oil Co. No. 1 Denio, Tract, 43-C, sec. 15-55n-97w.
T.D. 3,800 ft.; underreaming 8¾-in. to bottom.
J. H. Shaffer No. 1 Keachie, C SW SW sec. 5-49-61.
T.D. 1,350 ft.; sidetracking tools at 1,266 ft.
W. O. Taylor et al No. 1 Hoskins, Lot 5, (SE SE) sec. 25-56n-97w.
T.D. 5,275 ft.; cemented whipstock at 4,300 ft.; sidetracked drill pipe at 4,690 ft.; redrilling at 4,737 ft.

Campbell County

G. J. Shiren et al No. 1, SW SW sec. 31-49n-74w.
Spudding.

Carbon County

Ohio Oil Co. No. 1 Union Pacific, an east offset to its No. 1 Kyle, the Medicine Bow discovery well which made 6,300 bbls. of 63 gravity oil initial, a joint operation with the California Co., showed good saturation on a drill stem test from the upper Sundance at 5,259-5,300 feet, but satisfactory gauge was not obtained. It did not show any water. Same companies have made a location for No. 2 Union Pacific, a west offset to their No. 2 State, a recent completion.

General Petroleum Corp. No. 1 Whitford, a wildcat on the Overland Dome, stopped at 6,482 feet after passing through the big white sand in the lower Sundance at 6,349-6,435 feet. This sand was dry and carried an odor of sulfur water. It is plugging back to 6,400 feet to test the upper Sundance and probably will continue plugging back and testing the Dakota-Lakota series and Wall Creeks. Regardless of the outcome of this well, it is expected another test will be drilled.

Ohio Oil Co. and California Co. No. 1 Union Pacific, Acct. J, NE SW NW sec. 25-21-79w.
Drlg. 5,317 ft. in top second Sundance.
Ohio Oil Co. and California Co. No. 2 Union Pacific, C NE NE sec. 35-21n-79w.
Location (first report).
Ohio Oil Co. No. 8 Harrison & Cooper, CWL W½ SW sec. 35-20-78w.
T.D. 3,030 ft.; fishing for drill pipe.
Ohio Oil Co. No. 3 H. & C., NW NW SW sec. 35-20n-78w.
Drlg. 3,805 ft.
General Pet. Corp. No. 1 Whitford, SW SE SE sec. 24-20-84.
T.D. 6,482 ft.; plugged back to 6,400 ft. to test upper Sundance.
Shirley-Wyoming Oil Co. No. 1 Government, NW NE sec. 2-26n-80w.
S.D. 1,350 ft.; water in top of Sundance at 1,310-12 ft.
Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-18-78w.
Drlg. 4,400 ft.

Converse County

John Ackard No. 1 Daniels, SW SW SE sec. 17-32-71.
S.D. 4,004 ft.

Hot Springs County

California Exploration Co. No. 2 Government, NW SW NW sec. 4-44-96.
T.D. 4,245 ft.; recementing 8⅝-in. at 3,880 ft.
Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-46n-98w.
Location.
Stanolind O. & G. Co. No. 20 State-Ridgely, SE NE SE sec. 19-46n-98w.
Drlg. 2,344 ft.

Lincoln County

Senrab Oil Corp. No. 3 Government, CSL SE NW sec. 10-26n-113w.
S.D. 1,020 ft.

Natrona County

The California Co. has leased the Wallace Creek structure, near Waltman, 48 miles west of Casper in Township 34n-85w and will drill a deep test in 1936 if results of a seismograph survey prove satisfactory. The block includes the fee land of the Grieves cattle interests and some government land. The anticline, formed in the Fort Union beds, is badly covered. The Continental Oil Co. drilled a test several years ago in C SW section 15-34-87, which was abandoned at 4,130 feet without reaching the Wall Creek sands. It had sulfur water at 4,110-20 feet in sand and some gas in sand at 1,660-70 feet with more gas at 2,862-74 feet above the Mesa Verde coal beds. It had flowing sulfur water in the Teapot at 3,908-40 feet.

Empire State Oil Co. No. 15, NW SE NE sec. 11-33n-83w.
Spudded and S.D. account of weather.

Niobrara County

The Ohio Oil Co. No. 7 Converse Sheep, C NW SE section 32-36-65, Lance Creek field, reported a completion last week, flowed 2,604 bbls. first 24 hours from the lower Sundance at a total depth of 3,853 feet.

Argo Oil Co. No. 6 Elliott, C SE NW sec. 5-35n-63w.
Rigging up rotary.
J. H. Huber Co. No. 1 Jones, NE SE NW sec. 6-25n-65w.
T.D. 4,096 ft.; P.B. to 4,032 ft.; running 2-in. tubing and rigging up for pump test.
Ohio Oil Co. No. 6 Converse Sheep, 610 ft. from E line and 680 ft. from S line, SW SE sec. 32-36n-65w.
Cemented 7-in. at 3,707 ft. in top of lower Sundance.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w.
Rig up.
S. & H. Dev. Co. No. 1-A Olinger, SE NE NW sec. 1-36-63.
S.D. 1,674 ft.

Uinta County

Druscilla Connell and others No. 5 Government, SW NW NW section 24-15n-118, Spring Valley district, was abandoned at 1,050 feet.

Intermountain Pet. Corp. of Utah No. 1 Union Pacific-Haynes, SW NW SW sec. 24-19n-118w.
Drlg. 1,575 ft.
W. D. Marshall No. 1 Government, NW SW SE sec. 12-15n-118w.
Drlg. 1,116 ft.

Washakie County

Ariton & Doyle No. 1 Government, SW SW SE sec. 29-48-91w.
S.D. 1,115 ft.
Wyoming O. & R. Co. No. 2 Government, SW SW SW sec. 31-48-90.
Drlg. 1,450 ft.

MONTANA

Total crude oil stocks at the end of December in Montana were 1,050,737 bbls., compared with 1,055,564 at the end of November. Runs by Montana refineries were 174,601 bbls., compared with 193,579 bbls. in November.

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e.
S.D. 3,000 ft. after setting 6¼-in. at 2,895 ft. and drilling plug.

Fallon County

Montana-Dakota Utilities Co. No. 1, NE NW sec. 17-3n-62e.
T.D. 6,349 ft.; fishing for bit.

Fergus County

E. A. Fenholt No. 1, NW NW SW sec. 21-21n-17e.
Rigging up.
Judith Operating Co. No. 1 Government, C SW SW sec. 26-22n-17e.
Drlg. 1,131 ft.

Gallatin County

Ben W. Ryan No. 1 Tice, NE NE NE sec. 28-1n-2e.
Drlg. 2,721 ft.

Glacier County

The Santa Rita Oil & Gas Co. No. 1 Lander, C N half SE section 16-35-6w, reported a completion last week, marking not only an extension of the Cut Bank pool half a mile to the west and the bringing in of the largest producer so far completed in the field, but surprising everybody by producing from the Sunburst sand, making the following record: January 25, 10 hours, 114 bbls.; January 26, 24 hours, 496 bbls.; January 27, 24 hours, 890 bbls.; January 28, 24 hours, 840 bbls.; January 30, 24 hours, 738 bbls.

H. C. Lander, of Great Falls, upon whose land the well is located, acquired the 320-acre tract from a farm loan mortgage company he represented in lieu of salary early in the depression. The owner abandoned the land and the mortgage was foreclosed. At the time it was considered practically worthless. The Santa Rita company holds leases on Tribal land extending several miles to the north and three-fourths of a mile to the west. That company has made a location one-quarter of a mile to the east and the Texas Co. spotted a well on the section line to the south.

A. B. Cobb, No. 5 Walberger, C NE NE sec. 35-35n-6w.
Rig.
Cobb-Pardee No. 1 Stufft, C SE NW sec. 25-36n-6w.
S.D. 732 ft.
Cobb-Reagon No. 1 Jackson, NE NW NW sec. 5-32n-5w.
Drlg. 2,110 ft.
Gardner et al No. 1 Cole, C SE NW sec. 2-32n-6w.
Rigged; W.O. engine.
L. P. Jackson et al No. 1 Tribal, NW SE NW sec. 23-34n-7w.
Ready to spud.
R. C. Jeffries No. 4 Lukens, NE NE NE sec. 12-32n-6w.
S.D. 2,610 ft.
Kincheloe-Hanlon No. 1 State, SE SE SE sec. 25-32n-6w.
Drlg. 1,515 ft.
Jack Marshall No. 1 Tribal, 140 ft. S of N line and 200 ft. E of W line, Lot 7, sec. 7-32n-5w.
Coring at 2,850 ft.
McCabe & Jeffries No. 1 Rasmussen, NE

SW NE sec. 32-33n-5w.
Drlg. 2,685 ft.
Montana Power Gas Co. No. 1 Simero, C SE SE sec. 30-34n-5w.
Drlg. 1,450 ft.
Montana Power Gas Co. No. 2 Whetstone, S SW NE sec. 8-33n-5w.
Drlg. 1,600 ft.
Nadeau Bros. No. 1 Tribal, C Lot 4, sec. 6-32n-6w.
S.D. 2,615 ft.; recemented surface pipe.
Neil Spencer No. 1 Tweedy, CSL SE SW sec. 25-33n-6w.
Drlg. 2,775 ft.
Santa Rita O. & G. Co. No. 6 Tribal, 660 ft. S of C W line, sec. 15-35n-6w.
Building rig (first report).
Santa Rita O. & G. Co. No. 1 Shearon, 660 ft. S of N line and 349 ft. W of E line, sec. 34-36n-6w.
T.D. 2,725 ft.; underreaming 8¼-in.
Santa Rita O. & G. Co. No. 1 Corey, NE NW SE sec. 5-32n-5w.
S.D. 2,959 ft. for spudder.
R. C. Tarrant No. 6 Britton, C SE SW sec. 12-34n-6w.
Rigging.
R. C. Tarrant No. 5 Getty, NW NW SW sec. 2-34n-6w.
Drlg. 1,460 ft.
R. C. Tarrant No. 2 State, C NE SE sec. 36-34n-6w.
Drlg. 640 ft.; 10-in. at 527 ft.
R. C. Tarrant No. 7 Haglund, Jr., C SW SW sec. 13-34n-6w.
Standing rigged.
Texas Co. No. 5 fee, 660 ft. N of SW cor. sec. 15-35n-6w.
Moving in rotary equipment (first report).
Texas Co. No. 1 Walker, C NE NE sec. 2-35n-6w.
Drlg. 2,580 ft.
Texas Co. No. 1 Tribal, Lot 4, 1,300 ft. from W line, 200 ft. from S line, sec. 32-33n-5w.
Building road.
Wilkerson et al No. 1 Tribal, SW SE NE sec. 31-33n-5w.
Drlg. 850 ft.; Colorado at 380 ft.; 10-in. at 427 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e.
S.D. 446 ft.

Liberty County

Western Natural Gas Co. No. 1 Turner, C SE sec. 15-37n-4e.
Drlg. 1,530 ft. (first report).

Pondera County

Wm. M. Fulton No. 1 Price, SW NE NE sec. 18-27n-4w.
Rigging.
Norden Corp., Ltd., No. 1 Hollan, NW NW NW sec. 12-28n-6w.
Drlg. 638 ft.

Teton County

Teton Oil Co. No. 1 Reickhoff, C NE SW sec. 14-24n-5w.
Drlg. 2,136 ft.

UTAH

Grand County

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-25s-20e.
S.D. 135 ft. (corrected).
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22n-22e.
Drlg. 1,900 ft.
Glenn Ruby et al No. 1 State, NE SE SE sec. 34-31s-16e.
Setting 10-in. at 600 ft. to S.O. water and gas.

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Feb. 8.—Announcement has been made by J. H. McLeod, production manager, that Imperial Oil, Ltd., will this year drill several wildcat tests in Alberta on the Jumping Pound structure west of Calgary.

The Jumping Pound structure is about 25 miles west of Calgary, and it is understood the company plans to drill two or three shallow wells in the hope of finding oil sands. The area was first tested at the time of the Calgary oil boom in 1914, when several holes were drilled from 600 feet to 2,600 feet in depth with no oil wells resulting.

Kootenay Dome Test

On the Kootenay dome, south of the Stony Indian Reserve and approximately 40 miles west of Calgary, J. C. Dallas of Calgary has filed on some 6,080 acres which will be developed by Roxana Petroleums, Ltd. The area filed is south of the Stony Reserve east of Lusk Creek and extending southeasterly toward the Moose Mountain area. Acreage is in sections 4, 5, 6, 7, 8, 9, 17, 18, 19 and E half 20 in Township 24-7w5 with the adjacent E half of sections 14 and 15 in Township 28-8w5. Location for Roxana No. 1 has been tentatively spotted by Geologist Russell V. Johnson of Calgary in section 8-24-7w5 on the crest of the dome. In addition to the acreage filed, Mr. Dallas has secured control of the Wabash Oils' lease on the Stony Indian Reserve. No drilling has ever been done on the Kootenay dome. The Kootenay formation outcrops in many places and drilling should get the top of the Palaeozoic lime within a few hundred feet. In addition to its new drilling on the Kootenay dome acreage, Roxana Petroleums may deepen Wabash Oils No. 1 on the Stony Reserve. Roxana No. 1 is expected to spud by May 1.

South Turner Valley

In section 21-18-2w5, South Turner Valley, Union-Freehold Oil Corp. No. 1, LSD 8, finished in the Madison lime at 6,255 feet, is gradually clearing rotary water from the porous formation and shows encouraging development work. Since the province took over its natural resources in 1930 it has been the practice to grant credits on lease rentals on a well footage basis. Under the amended regulations the minister is empowered to grant a credit to the full amount expended in actual drilling operations exclusive of the cost of machinery and casing and of all other extraneous expenses, but including reasonable depreciation. This enables the operator where oil is not found in commercial quantities to spend his money in actual development and yet maintain his leases in good standing. The grouping privilege for credit purposes has been increased from 20,000 to 50,000 acres and the form of the group is left to the minister's discretion.

Further provision is made for the utilization of areas where there is considerable private property and for the acceptance of royalty on such utilization in the proportion that the acreage of crown lands bears to the total acreage comprised within the area; but the province must receive not less than 50 per cent of the prescribed royalty.

Border Fields

On the Comrey structure in southeastern Alberta, McDougall-McLeod Oil Co. No. 1, section 9-1-5w4, got considerable water in the Sunburst sand and is making shutoff at 3,180 feet.

On the Del Bonita structure south of Lethbridge, Terminal Oil Co. No. 1, H. Orcutt farm, NE section 18-1-21w4, has deepened in the Madison lime to 5,090 feet, and is waiting for a second acid treatment. Materials and equipment have been held up by snow-blocked roads. Following acid treatment, production test will be made. In addition to the naphtha, wet gas and light crude shows in the Madison, a gas flow was indicated higher up in the Sunburst, but owing to rotary fluid in the hole its importance could not be determined. This may later be tested for production. The hole is entirely free from water.

Regulations Amended

Amendments have been made by Hon. C. C. Ross, minister of lands and mines, to the oil and gas regulations of Alberta with a view to some increase in wet gas and naphtha recovery. It looks like a fair producer. Highwood-Sarcee Oils No. 2, LSD 1, same section, is below 2,310 feet.

Farther north in section 28-18-2w5, British Dominion Oil & Development Corp. No. 4, LSD 6, is taking production around 100 bbls. a day and running one hour, deepening into the black lime, below 6,325 feet. It is nearly 500 feet in the Madison. Turner Valley Royalties No. 1, LSD 13, same section, is deepening from 3,180 feet after installing rotary outfit.

Weymarn Field

On the Pincher Creek structure in the southern foothills, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, is at 5,154 feet and preparing for production test. The 8-inch casing will be lowered from 2,570 to about 4,500 feet where the first pronounced oil shows were encountered. Several sands were encountered in the bottom 650 feet and gas and black crude have been forcing themselves up through the rotary fluid. The drill is in the Dalhousie sand, which produced light crude in commercial quantities in some of the Turner Valley wells.

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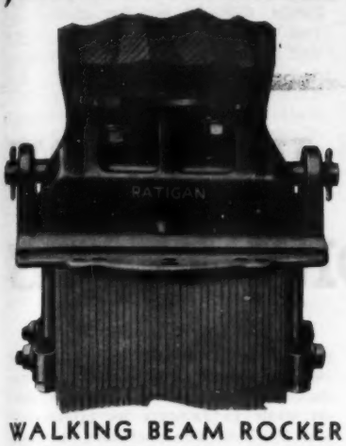

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Among Gulf Coast Drilling Contractors

Glenn H. McCarthy has moved in his large rig to the Amelia prospect in northern Jefferson County to drill No. 1 Longe, located about 2 miles northwest of Humble Oil & Refining Co. No. 1 Langham which has the earmarks of opening up a new field. No. 6 White located in the Anahuac field is being completed for Humble Oil & Refining Co. It is bottomed in oil sand at 7,110 feet. East of Houston, No. 1 Harris County Houston Ship Channel is rigged up and will be spudded during the week. It is being drilled for the Harlyn Oil Corp. and is located in the Richard and Robert Vince Survey.

George Echols has one rig running in East Texas for Houston Oil Co., one at the Gillis field for Fohs Oil Co. and one in Southwest Texas for the Sun Oil Co.

Cron & Gracey have nine rigs running located as follows, three at Iowa for Shell Petroleum Co., one at Roanoke for the same company, one at Manvel for the Texas Co., one at South Houston for Stanolind Oil & Gas Co., one at Barbers Hill for Sinclair Prairie Oil Co., one at Placedo for Barnsdall Oil Co. and one at Eunice, New Mexico, for the Repollo Oil Co.

Rutherford Drilling Co. is making fast time on two wells located at the Bay City field for Skelly Oil Co. No. 1 E. C. Metzger is drilling in shale and lime below 3,000 feet and 5-B Cobb is drilling in shale below 3,200 feet. No. 4-B Cobb will probably be spudded during the week.

Rowan Drilling Co. is rigging up on No. 1 Beasley at the Cheneyville field in Rapides Parish, Louisiana, for Amerada Petroleum Corp.

Anderson-Kerr and De Arman have averaged over 500 feet per day on Cockburn Oil Co. and others No. 1 Tomkins located on the Burnett Bay in Harris County, as it is drilling in shale below 4,506 feet after surface plug had been drilled the first part of the week. In southern Chambers County, No. 1 Barrow is shut down around 6,900 feet waiting on fuel oil. It is being drilled for the Black Gold Oil Co.

Edwards Drilling Co. has rigged up and will probably spud No. 3 Stewart located in the south extension area of the Dickinson field, Galveston County, for the Coast Petroleum Co. On the Jefferson Island dome in Iberia Parish, Louisiana, Jefferson Lake Oil Co. No. 274 Lake Piegneur has been plugged back, sidetracked and is drilling ahead in shale below 8,500 feet.

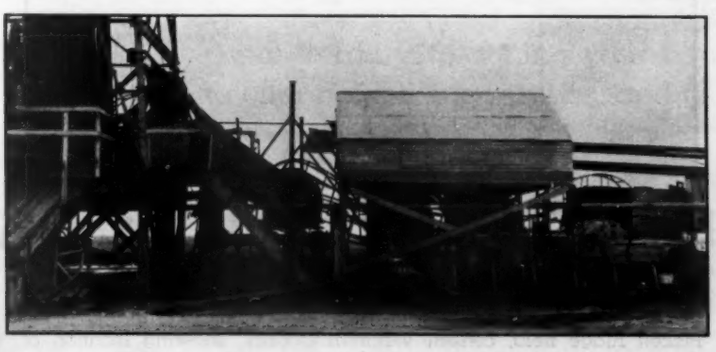
Nicklos Drilling Co. is nearing the pay on No. 1 D. J. Miller located in the Tepetate field, Acadia Parish, for Continental Oil Co. as it is drilling below 7,750 feet in shale. No. 1 Marcantel, a workover job, is milling on casing.

Smith and McDannald completed No. 1 Jones at Louise for Pure Oil Co. and is rigging up on No. 3 Weaver for the same company. At St. Martinsville for the Tide Water Oil Co. No. 2 Smedes is drilling in shale below 8,196 feet. At South Houston for Stanolind Oil & Gas Co. Surface casing has been cemented in District No. 25, while at the Hastings field for the same company, No. 2 Autrey is rigged up and ready to spud. A. G. Oliphant No. 1 Calcasieu National Bank located on the Vinton prospect is rigged up and will probably be spudded during the week. No. 2 Reagan at the Long Lake field is drilling ahead below 4,700 feet. It is being drilled for Tide Water Oil Co. At the South Houston field these contractors are moving in a rig for themselves to drill a well, located in Lots 51 and 52 of the Houston Garden Subdivision.

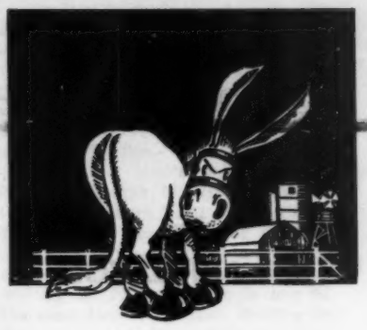
Trinity Drillers, Inc. are drilling for two producers in the Lopez field of Webb County, in addition to starting a new wildcat in Duval County for the Continental Oil Co. The drilling company has moved onto the Gulf States Oil Co. No. 1 Delta Orchards in Hidalgo County and will resume drilling shortly on the test which has been shut down for several weeks.

Al Buchanan of San Antonio completed three good producers for the Plymouth Oil Co. in the Plymouth field of San Patricio County; and brought in four wells in the Seven Sisters field, Duval County, for Buchanan & Blanco Oil Co., Mid-Continent Petroleum Corp. and Shell Petroleum Corp. In the latter field, rigs are drilling for Pan American in addition to the other three companies. A Buchanan crew is also drilling a wildcat in San Patricio County for the Stanolind Oil & Gas Co. and a Humble well in the Loma Novia field.

The Gorman-Yoakam Drilling Co., newly formed San Antonio firm, is drilling two tests in the Loma Novia field for the Texas Co. and the Eastern Texas Petroleum Co. in Surveys 71 and 59, southern part of the field.



Heavy gasoline engine driven rig used in drilling on the beach in Jefferson County, Texas, by Humble Oil & Refining Company



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Texas and Louisiana Gulf

By
F. L. SINGLETON

AMELIA PROSPECT WILL BE GIVEN SEVERAL MORE TESTS

HOUSTON, Tex., Feb. 10.—The Amelia prospect, northern Jefferson County, continued to be the center of interest among Gulf Coast operators at the close of the week, as Humble Oil & Refining Co. prepared to test its No. 1 Langham which last week showed 3,400 feet of oil and 60 feet of brackish water on a drill stem test from 6,772-91 feet. Afterwards the hole was cored to 6,903 feet and on a drill stem test through a quarter-inch choke from 6,791-6,817 feet and showed 3,600 feet of salt water and has been plugged back to 6,777 feet. The oil sand was topped at 6,770 feet. Seven-inch casing will be cemented at 6,777 feet and the operators will then drill out cement to 6,790 feet and underream before the test is made.

The salt water showing apparently places the well on the south or southwest edge of the structure and some are of the opinion that the high part of the structure lies to the east and northeast, which if true will place the best part of the field at the back door of the Beaumont city limits, at any rate leases in this area are being sold as high as $1,000 per acre in cash and the same amount in oil while royalty is being sold for $500 per acre base.

Three locations have already been made and it is reported that applications for several more have been filed at the Railroad Commission offices at Beaumont. A large majority of the permits, however, will probably be held up until a hearing is held by the commission regarding rules and drilling regulations in the district. To the northwest of No. 1 Langham, approximately 2 miles in the H. Williams Survey, Glenn H. McCarthy, Inc. is ready to spud No. 1 Longe located 330 feet out of the southeast corner of a 100-acre tract. North of No. 1 Langham Humble Oil & Refining Co. has derrick up for No. 1 Broussard located 466 feet of the southwest corner of a 72.76-acre tract in the C. Williams Survey. Northwest in the Brock 64.52-acre tract, the same company has filed application to drill. The expiration of several leases is expected to create a rapid development program for this area.

Dickinson Extended

The Dickinson field, Galveston County, was extended approximately a half mile to the east when Humble Oil & Refining Co. No. 1-B San Leon Farm was brought in for a high pressure gas well. On a quarter-inch choke closed-in tubing pressure registered 3,000 pounds, but due to the high gas-oil ratio the connection became frozen and the well will be reworked in attempt to complete it as an oil well. The hole is bottomed at 9,199 feet, but the well was tested through perforated casing from 8,356-75 feet. Seven-inch casing was cemented at 8,476 feet. Location is in the south half of Block 102 in the A. E. Edwards Survey. To the southeast in the J. Sellers Survey, the same company's No. 2 Anderson was completed at a total depth of 9,112 feet for an initial production of 18 bbls. per hour through a quarter-inch choke with tubing pressure 2,350 pounds and casing pressure 2,925 pounds. Gravity of the oil tested 36.5. The company's No. 3-B Stewart which was plugged back to 8,510 feet last week was tested through a series of perforations from 8,505 to 8,942 feet, but showed nothing but oil, salt water and mud and has been plugged back again to 8,400 feet.

Anahuac Field

At the Anahuac field, Chambers County, Humble Oil & Refining Co. has four wells scheduled to be completed during the week. In section 73, No. 7 Broussard topped oil sand at 6,964 feet and is bottomed in sand at 7,082 feet with 7-inch casing cemented at 7,040 feet. No. 7 Engels topped the sand at 6,929 feet and is waiting on cement to set at a total depth of 7,082 feet. No. 6 White in the northern part of the field topped oil sand at 7,082 feet and is expecting to test at a total depth of 7,110 feet. No. 3 Zappe in section 51 is coring oil sand at 7,015 feet.

To the northwest in the Turtle Bay field, Stanolind Oil & Gas Co. No. 1 Cooper, a west offset to the discovery well in the S. Burney Survey is swabbing showing some oil after the hole was plugged back from 6,625 feet to 6,611 feet. When tested last week, it flowed 20 bbls. of fluid per hour of which 50 per cent was salt water. Piling for No. 1 State located south of the discovery well in the water of Turtle Bay is being driven.

Shepherds Mott

Helmerich and Payne No. 1 Hawkins, situated on the Shepherds Mott dome in the D. McCarthy Survey, Matagorda County, continues swabbing, showing fresh water and drilling mud from a screen setting made last week from 7,770-96 feet. The hole is bottomed in the Frio horizon at 7,831 feet which is reported to have carried several showings of oil encountered in several cores taken during the last 100 feet. West of the dome and midway between H. M. Smith and others No. 1 Wadsworth, completed a few months ago for a small well, the same operators have derrick up for No. 2 Wadsworth. It is situated 150 feet south of the north line and 300 feet west of the east line of Lot 33, Block 4, or 3,512 feet east and 300 feet south of No. 1 in the S. R. Fisher Survey. No. 1 Wadsworth was completed at a total depth of 8,853 feet and during the month of December it produced a total of 600 bbls. of pipe line oil while in January its production was 700 bbls. The operators are now trying to swab the well, but are unable to get below 300 feet due to a heavy oil residue in the 2½-inch tubing.

In the same county, but southeast of Bay City, Hamman Exploration Co. No. 1 Cleveland in the E. Hall Survey is drilling in shale with no show below 9,000 feet. Continental Oil Co. No. 1 Fief, located at the Citrus Grove prospect is bottomed at 7,629 feet and the operators are fishing. Location is in the J. S. Criswell Survey. In the Tone and Jameson Survey, John Deering No. 1 Estelle is shut down at a total depth of 6,525 feet.

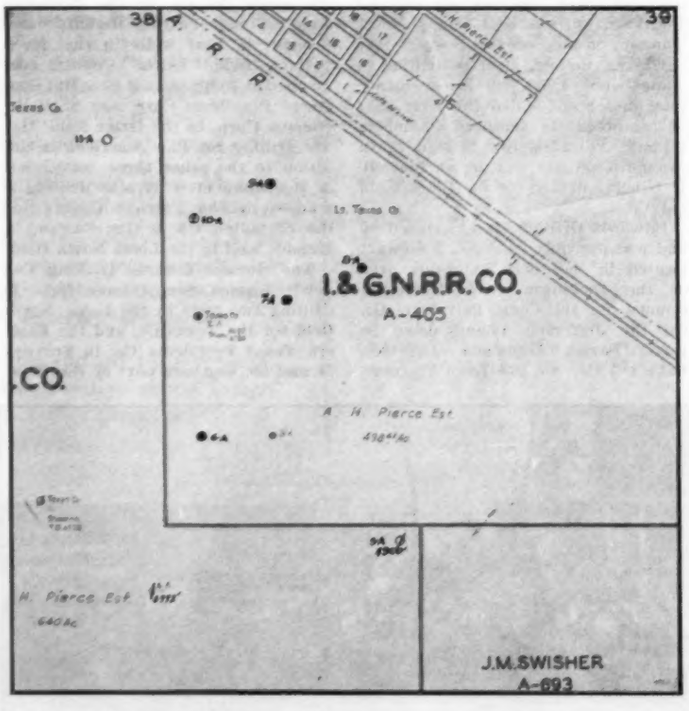
Interesting Wildcats

Locations for two interesting wildcats were made. In the Cedar Lake area, Brazoria County, Strake Petroleum Co. is building a barge to move in a rig for No. 1 T. J. Poole, located 6,249 feet from the east line of C. J. Rogers Survey and 750 feet due south of the south corner of the W. Harding Survey. In the Willis district, Montgomery County, Charles Gholson has made location for No. 1 T. J. Johnson in the center of a 100-acre tract in the William Weir Survey. It is south of the operators No. 1 A. Parks that created some interest a few months ago when it showed some oil and gas when it tested the Cockfield sand bottomed at around 3,700 feet.

Stanolind Oil & Gas Co. is moving in rig to two locations made in the Hastings field. They are No. 4 Shaw situated 330 feet south and 990 feet west of the most easterly northeast corner of a 120-acre tract, and No. 5 Shaw located 330 feet west and 990 feet south of the most northerly northeast corner of a 120-acre tract. Both locations being in the H.T.&B. Survey No. 36.

Approximately 2 miles northwest of the Pickett Ridge field, Wharton County, Trinity Drillers, Inc. are moving in material for No. 1 Joseph Marek, located 488 feet out of the south corner of section 76 in the I.& G.N. Survey. Across the line to the west in Lavaca County, Goode and others No. 1 J. A. Staffa, 10 miles north of Halletsville in the W. R. Hensley Survey is drilling in shale below 1,094 feet.

In the Green Lake area, Calhoun County, Humble Oil & Refining Co. No. 1 E. Welder located in the Gardner Smith Survey is reported to have cored sand with a slight show of oil below 5,700 feet and on a drill stem test from 5,740-64 feet, it tested 17 stands of salt water and it is drilling ahead below 6,072 feet. At the Sendrift prospect, Calhoun County, Continental Oil Co. No. 2-A American



Pickett Ridge field, central Wharton County, showing location of producing and drilling wells

(Map by W. W. Zingery, Second National Bank Building, Houston, Tex.)

Realty Co. is milling on the bit head on bottom of the 8⅝-inch casing which was cemented at 8,023 feet. Location is in the Pedro Garcia Survey.

West of Houston in Harris County, Texas Gulf Production Co. and others No. 1 West Moreland Development Co. is drilling in shale below 8,570 feet after topping the Cockfield sand at 8,570 feet. Location is in the J. B. Pier Survey. On the Burnett Bay prospect, in the eastern part of the county, Cockburn Oil Co. and others No. 1 Tomkins is drilling in shale and lime below 4,078 feet.

Coastal Louisiana

With the exception of an east extension being made at the Gillis field, Calcasieu Parish, developments in Coastal Louisiana were of routine nature.

Fohs Oil Co. No. 9 Castle located 1,000 feet east of production in section 13-9s-8w, cored sand showing oil from 7,001-44 feet and was completed at a total depth of 7,075 feet for an initial production of 600 bbls. per day through a quarter-inch choke with tubing pressure 2,075 pounds and casing pressure 1,250 pounds. In the north extension area, Union Sulphur Co. No. 6 Castle cored salt water with a slight odor of oil topped at 5,289 feet. The sand was encountered several feet lower than the same company's No. 3 Castle which opened production from a shallow sand a few weeks ago. Location is in section 13-9s-8w.

On the east side of the Tepetate field, Acadia Parish, two lease trades were consummated the past week which call for the drilling of five wells. R. J. St. Germain of Houston sold a half interest in his L. Bowles 160-acre lease located in the E half E half section 28, to Loffland Brothers. The consideration was $20,000 in cash and Loffland Brothers are obligated to drill four free wells. Adjoining this tract to the north, Clark and Cowden sold a half interest in their 40-acre L. Bowles lease to the same company for a cash consideration of $5,000 and one free well. The first well on each tract is to be started within 30 days.

In the Johnston Bayou area, southwestern Cameron Parish, Magnolia Petroleum Co. acquired 6,440 acres of the Matilda Gray land, completing an option on a block of some 26,000 acres in this area which is scheduled to be worked extensively with geophysical instruments. The block centers around Townships 15s-13 and 14-15w, and five-year commercial leases are to be taken by the company after geophysical work is done, provided a structure is found.

Second Well in Garden Island

The Garden Island dome, southern Plaquemines Parish, received its second producer by the completion of Texas Co. No. 17 State which flowed 295 bbls. per day through a three-eighths inch choke, made through perforated casing from 4,885-4,903 feet. It was originally drilled 5,527 feet in salt which was topped at 5,510 feet and was plugged back to 4,967 feet. While the company has been exploring this dome for several years, it was not until last September that it received its first commercial production, when Texas Co. completed No. 16 State from the Miocene sand at the approximate depth encountered in No. 17 State. No. 17 State is located in section 37-23s-23e.

Across the Mississippi River, in Wilkinson County, Mississippi, Charles Green and others No. 1 Foster Creek Lumber Co., located in the C SE¼ section 8-3n-1e, is temporarily shut down in sticky shale at 3,100 feet, waiting on fuel oil. This is one of the most interesting tests drilling in this area and is scheduled to be drilled to 5,000 feet. The first sands are exected to be encountered in the upper Wilcox formation.

Roanoke Field

At the Roanoke field, Jefferson Davis Parish, Humble Oil & Refining Co. No. 5 Kratzer extended the field to the northwest, when it flowed 600 bbls. of 40.6 gravity oil per day through a quarter-inch choke from a total depth of 8,694 feet. The tubing pressure was 1,150 pounds and the casing pressure 1,475 pounds. Location is in section 11-9s-4w. Shell Petroleum Corp. No. 2 Carter in section 1-9s-4w, is drilling in shale below 8,100 feet.

Texas Co. was preparing to test No. 2 Rigolet Co. located in the Lafitte field in Jefferson Parish, after cementing 7-inch casing at 9,575 feet. The hole is bottomed in oil sand topped at 9,578 feet. This will be the fourth producer for the field and it will extend production approximately 1,000 feet to the southwest. Location is in section 30-19s-24e. The company's No. 3 Lafitte in section 19 is drilling in shale below 7,000 feet.

GULF COAST WATER SHIPMENTS—DECEMBER, 1935

Company and terminal—	Crude		Refined		
	Coastwise	Exports	Coastwise	Exports	Total
Atlantic Pipe Line Co.:					
Atreco	1,841,824.28	.....	19,759.47	.....	1,861,583.75
Texas City	192,399.91	.....	2,969.74	.....	195,369.65
Harbor Island	758,039.55	30,186.47	.....	.....	788,226.02
Gulf Refining Co.:					
Port Arthur	362,547.68	.....	2,668,017.08	231,748.69	3,262,313.45
Humble Oil & Refining Co.:					
Baytown	563,363.66	.....	3,189,280.03	826,960.73	4,579,604.41
Harbor Island	1,462,938.02	169,490.89	.....	.....	1,632,428.91
Texas City	959,643.31	.....	.....	.....	959,643.31
Ingleside	32,026.69	.....	.....	.....	32,026.69
Magnolia Petroleum Co.:					
Beaumont	1,049,082.77	.....	2,657,325.55	.....	3,706,408.32
Pure Oil Co.:					
Smiths Bluff	366,170.00	.....	718,641.00	.....	1,084,811.00
Shell Petroleum Corp.:					
Houston	46,863.00	.....	1,239,963.00	87,762.00	1,374,588.00
Norco	.....	.....	434,807.00	.....	434,807.00
Standard Oil Co. of La.:					
Baton Rouge	125,805.00	.....	2,092,303.00	284,797.00	2,502,905.00
Sun Pipe Line Co.:					
Sabine Pass & Sun	1,395,365.55	.....	.....	.....	1,395,365.55
The Texas Co.:					
Port Arthur	811,653.00	735,785.00	2,519,063.00	920,920.00	4,987,421.00
Miscellaneous:					
Houston	1,801,614.94	370,926.50	1,157,768.78	424,472.17	3,754,782.39
Total November	11,059,486.57	1,332,222.20	15,764,465.98	2,593,823.34	30,799,998.09
Total December	11,770,336.36	1,306,388.86	16,699,897.64	2,776,660.59	32,553,283.45
Difference	710,849.79	75,833.34	935,431.66	182,837.25	1,753,285.36

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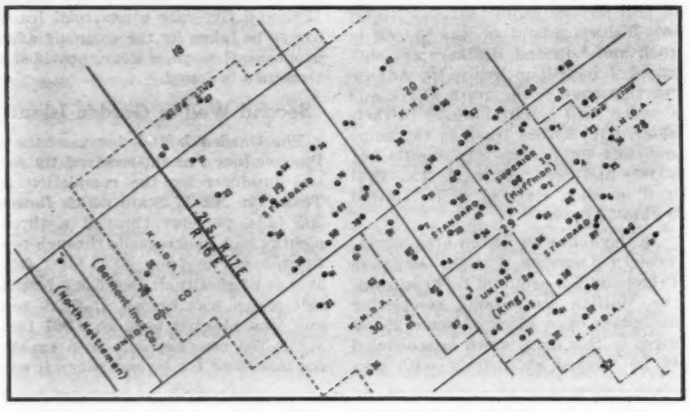
California Field Report

By L. P. STOCKMAN

CALIFORNIA'S PRODUCTION IS REDUCED AT CLOSE OF WEEK

LOS ANGELES, Calif., Feb. 10.—Crude oil production in California, while it averaged 628,250 bbls. per day for the week, dropped below the 900,000-bbl. mark at the close of the week for the first time since September 1, 1935, and a further substantial reduction is expected in a few days when independent producers begin reducing production to allowables. Major companies began cutting back production on February 1 and by February 8 the state's output had been reduced from 668,654 bbls. to 585,120 bbls. This represents a primary reduction of 83,534 bbls. per day and should prove a powerful incentive to independent operators to conform with the new curtailment program and thus take advantage of the projected increase in crude oil prices. The Barnsdall, Kettleman North Dome Association, Continental and several other progressive operators joined in cutting back production ahead of the day, February 10, which the Central Committee fixed some time ago as the start of the new curtailment program. It is the general belief that crude oil production in California will be down to the new allowable of 537,000 bbls. per day by February 15, although much depends upon the action of several large producers. The reduction in crude oil output and impending increase in crude oil prices will necessitate a revision in refined oil prices if marketers are to preserve the present relationship between the price of crude and the market price of refined oil. For the past three or four weeks smaller refiners have been endeavoring to purchase crude oil below the posted price but have met with very little success. Several independent refiners who have been obliged to shut down within the past month may be able to resume operations in the near future because it is almost certain that some crude oil producers will fail to conform with the new curtailment program and by thus producing without restraint will be able to supply certain independent refiners with crude oil slightly below the expected new prices to be posted for crude oil. Major companies would not be able to maintain higher prices for crude oil in the face of unethical competition on a large scale, therefore it is definitely up to producers to determine the market price for their commodity. Production and distribution of natural gasoline is fairly well centralized, but fuel oil prices may ease off to some extent if independent refiners succeed in buying crude oil below standardized quotations.

In the latter part of December and early in January, independent refiners were able to pay a small premium for crude oil but reduced prices for gasoline in Los Angeles Basin put an end to this practice. Previously, independent refiners were in a position to pay premiums ranging as high as 30 cents per barrel and still show a small profit. The reduction of 2 cents per gallon in gasoline prices in Southern California territory terminated this policy and this smaller group is now endeavoring to persuade crude oil producers to disregard the proposed curtailment program as such a procedure would permit this small group of independent refiners to resume operations even at the present price of refined oil, provided they are able to purchase crude oil at 10 per cent below the projected price which is expected to be posted by the Standard Oil Co. If the major refiners fail to raise refined oil prices, the producers involved and a small group of refiners will be left holding the sack. Legitimate refiners and marketers, such as Hancock Oil Co., Macmillan Petroleum Co., St. Helens Petroleum Co. and other progressive refiners in this category, are not involved in the plan to induce independent producers to overproduce as all legitimate marketers recognize the fact that if refined oil prices crash they will sustain serious losses because of the necessity of meeting competition. The recently organized Independent Refiners Association of California, which consists of approximately 25 independent refiners, may be able to stabilize conditions to some extent, especially if members refuse to purchase crude oil from independent producers who fail to conform with the new curtailment program, and it would not be at all surprising if this group took a very definite stand on the present movement to restrict production. There is no reason why any producer in California should not have a market for current production if he complies with curtailment requirements, as practically every major operator is willing and anxious to tie up crude oil production on purchase contracts anywhere from one to three years' duration.



Western end of the Kettleman North Dome field, California

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	January 26		January 19			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	.....	235,544
Gasoline	.....	.....	115,850	16,550	463,330	459,149
Kerosene	75,987	10,855	73,859	10,551	228,486	78,460
Foreign exports:						
Crude oil	115,205	16,458	178,760	25,537	463,590	628,263
Fuel oil	245,305	35,044	251,634	35,233	1,068,193	887,132
Diesel and gas oil	68,469	9,781	110,354	15,765	272,115	135,562
Gasoline	.....	.....	100,214	14,316	421,482	114,476
Kerosene	.....	.....	9,986	1,427	21,935	98,830
Coastwise-domestic:						
Crude oil	.....	.....	288,059	41,151	431,966	520,512
Fuel oil	197,960	28,280	153,612	21,945	676,306	1,077,849
Diesel and gas oil	.....	.....	64,975	9,282	98,014	21,048
Gasoline	157,381	22,483	422,837	60,548	1,004,736	626,514
Kerosene	4,477	640	3,531	504	15,472	23,714

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	78,075
Lubricants	.....	.....	.....	.....	.....	4,005
Foreign exports:						
Crude oil	.....	.....	71,695	10,242	192,079	169,624
Fuel oil	21,410	3,059	17,632	2,519	59,220	92,537
Diesel and gas oil	.....	.....	.....	.....	.....	74,557
Gasoline	58,232	8,317	.....	.....	163,420	293,495
Kerosene	15,889	2,270	.....	.....	15,889	42,139
Lubricants	.....	.....	.....	.....	10,311	19,413
Coastwise-domestic:						
Fuel oil	139,311	19,902	165,741	23,677	611,355	808,708
Diesel and gas oil	41,963	5,995	.....	.....	60,935	10,490
Gasoline	126,108	18,017	16,127	2,304	273,949	232,921
Kerosene	2,416	345	2,369	338	15,699	.....

Wildcatting Plans

Drilling operations continue to increase at a normal rate and it appears quite probable that several additional wildcats will be started during the course of the next few months. The Texas Co. is contemplating additional exploration work in Humboldt County and Barnsdall Oil Co. will, in all probability, start a new test in San Luis Obispo County within the next 90 days. Preparatory to locating its first test in this area, the Barnsdall company is conducting a comprehensive geophysical survey and the location of the company's projected wildcat will be based on the outcome of this exploratory work. During the past week Barnsdall started rigging up drilling equipment on a tideland project originally started by the Bolsa Chica Oil Co. at Coal Oil Point. Coal Oil Point area is located approximately 3 miles east of the Elwood field of Santa Barbara County and it is the present intention of the Barnsdall to carry this well down into the Eocene for a deep conclusive test. Drilling operations will be resumed at approximately 5,510 feet, where the Superior Oil Co. suspended operations after it took over the hole for work. After the Bolsa Chica started work, this tideland project remained idle for several months until the Doyle Petroleum Co. and the Superior Oil Co. deemed it worthy of deeper drilling. The Vaqueros and Sespe failed to yield commercial production, but the Barnsdall may be more successful as a result of deeper drilling. This well undoubtedly justifies deep drilling as the existence of an anticlinal structure is evident at this point. Some doubt exists with respect to closure but at the same time this may be due to the difficulties encountered in the mapping of subsurface structures. The Barnsdall's test at Coal Oil Point should prove an interesting one due to the company's experience with tideland development in the Elwood field. This is especially true in view of the fact that the Barnsdall has logged a very promising oil sand in the Eocene at Elwood.

Elwood

No. 12 Luton Bell of the Barnsdall in the Elwood field of Santa Barbara County came in wet on a swabbing test a short time ago at 7,157 feet and the company is now engaged in remedial work. The failure of this well to result in commercial production was unexpected as the quantity and apparent saturation of the oil zone found in the Eocene tended to indicate that substantial production might be anticipated. Despite the failure of this well to result in commercial production, the oil zone

logged in the Eocene still looks like the best horizon encountered in the Elwood field up to the present time. Barnsdall and Rio Grande recompleted No. 7 tideland permit No. 88, after redrilling and deepening this well from the Vaqueros to the underlying Sespe. This well was returned to production flowing 1,005 bbls. of clean 38.7 gravity oil and 480,000 feet of gas per day from 3,619 feet. The General Petroleum is expected to complete No. 15 Erburu in the Capitan field of Santa Barbara County within the next few days as drilling operations have been concluded in the Sespe oil zone at 2,421 feet.

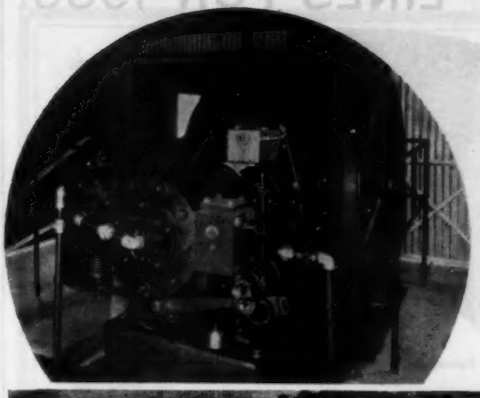
Union Oil Co. is hauling in rotary drilling equipment preparatory to spudding in No. 1 Sudden, a wildcat which will be drilled in Santa Barbara County in close proximity to tidewater about midway between Point Arguello and Point Conception. The Union will probably not be obliged to drill below 4,700 feet as the Cretaceous is encountered in this area at a shallow depth. In the Ventura Avenue field, the Shell Oil Co. completed No. 69 Taylor and this new well, bottomed at 7,104 feet, was brought in flowing 268 bbls. of 31.2 gravity oil cutting 11 per cent salt water. It is quite possible that the Shell, due to this large cut, will undertake some remedial work, especially since the water contains 1,360 grains of salt. The Associated is starting three new wells in the Ventura Avenue field and with new rigs in course of construction for No. 98 Lloyd and No. 12 McGonigle, it appears quite probable that two of this trio will be making hole in the near future. The General Petroleum has been working on No. 13 Notten for the past three weeks in an effort to recover the drill pipe which has been holding up progress, but very little success has been made up to the present time. No. 13 Notten is bottomed in the deep 57 zone at 9,510 feet and if the company succeeds in cleaning out the hole commercial production should be developed. Union Oil Co. is not at all satisfied with the production of No. 10 Dryden, a deep Eocene test in the Bardsdale district of Ventura County, due to the excessive amount of water and emulsion which the well is producing and consequently the company will undoubtedly undertake some remedial work. No. 10 Dryden, bottomed at 5,758 feet and with an 8⅝-inch water string landed and cemented at 5,250 feet, is pumping 150 bbls. of 25.1 gravity oil cutting approximately 20 per cent. The Duke Oil Corp., which late last year subleased 120 acres of potential oil land in the Bardsdale field to the Union Oil Co., is making preparations to land a string of casing in its No. 1, located in section 7-3-19, preparatory to a test to be made of an oil sand logged at 1,998 feet.

The Continental Oil Co. has logged a rather promising oil sand in No. 1 Hobson, which the company is drilling north of the San Miguelito fault in Ventura County, and this wildcat may bear watching during the course of drilling operations during the next few weeks. No. 1 Hobson, located in section 15-3-24, is bottomed in oil sand at 5,501 feet. South of the fault and located within the proven limits of the San Miguelito field, the Continental is building rig for No. 5 Grubb, which will be drilled in section 24-3-24. The Continental, which discovered the San Miguelito field a few years ago, has completed four producing wells in this field up to the present time. The General Petroleum is apparently not satisfied with the result of its first test in the Oxnard district of Ventura County because the company is building rig for a second test to be drilled upon the McGrath lease in section 26-2-23. In the Shiells Canyon district of Ventura County, the Bankline Oil Co. is making preparations to land a water string in No. 2 Calumet as a formation test made of this well, located in section 3-3-19, resulted in the recovery of 20 stands of oil which was practically free from water. The Texas Co. is nearing the 2,000-foot level in No. 129 Shiells, a projected deep test in section 4-3-19, but it will be another 90 days before this well reaches the depth at which production is anticipated.

Mountain View

Several wells were put on production in the Mountain View field of Kern County, the Shell and Standard recording two each. The former's completions in this field were Nos. 3 and 6 on Porter lease No. 2. No. 2-3 Porter of the Shell, bottomed at 6,063 feet, was brought in flowing 838 bbls. of exceptionally clean 30.8 gravity oil per day after being redrilled and deepened to the lower zone. Well No. 6 on Porter lease No. 2 was a new well which was brought in flowing 481 bbls. of clean 32.9 gravity oil and 1,200,000 feet of gas per day from 5,780 feet after the hole had been finished with a 6⅝-inch liner carrying 670 feet of perforated. The Standard's two new completions during the current week in the Mountain View field were Nos. 3 and 4 on the Mullaney lease located in section 24-30-28. No. 3 was brought in flowing 1,023 bbls. of 25.2 gravity oil per day from 5,170 feet after the hole had been plugged back from 5,265 feet. No. 4 Mullaney registered an initial daily production of 670 bbls. from 5,140 feet after the hole had been plugged back from 5,238 feet. Both of these wells showed a cut of a little more than 4 per cent due either to bottom water or edgewater encroachment. No. 9 Hopkins of the Vesta Petroleum Co., in section 19-30-29, on the other hand, showed practically no water cut upon completion at 5,162 feet after the hole had been plugged back from 5,343 feet. This new well, which was finished with a 6⅝-inch liner carrying 240 feet of perforated, was brought in flowing 352 bbls. of clean 27.2 gravity oil and 348,000 feet of gas per day. The Hancock Oil Co. recompleted No. 3 Miller during the early part of the week, and this well, located in section 14-30-28, was returned to production flowing 760 bbls. of relatively clean 23.4 gravity oil per day after the hole had been redrilled and deepened to 5,373 feet and finished with a 6⅝-inch liner including 191 feet of perforated. The Mohawk Oil Co. has just recompleted No. 2 Bloemer at 5,882 feet and O'Kane & Brain have finished No. 2 Wright-Bloemer at 5,922 feet, but the initial daily production of these two wells will not be available for another 24 hours.

The A. T. Jergins Trust completed No. 2 Hershey in the Edison field of Kern County during the early part of the current week and this new well, the fifth producer to be finished on this lease, was brought in pumping 380 bbls. of 19.2 gravity oil per day from 1,550 feet after the hole had been plugged back from 1,583 feet. No. 3 Smithwick made 1,848



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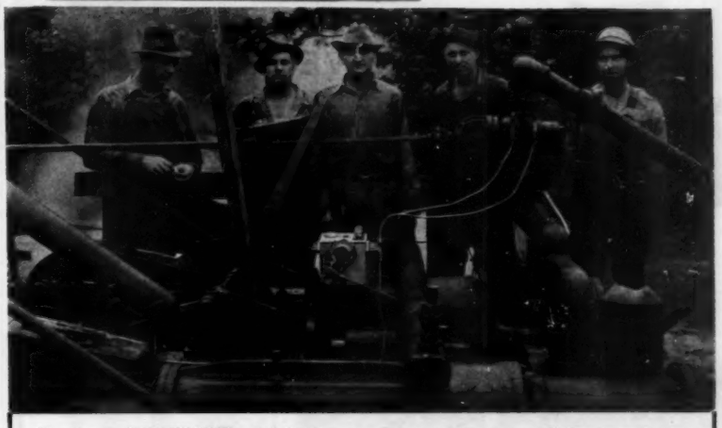

Above: A "STANDARD" Lubricator on a gas engine near Gladewater. Below: "STANDARD" Lubrication on a drilling engine near Kilgore. The crew, left to right: L. D. Smith, R. W. Kelley, T. Y. Allen, driller; L. N. Mayer and H. C. Harrell.

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feet of hole in six days and this well, which topped the Schist at 1,319 feet, has been plugged back to 1,225 feet from which depth a production test will be made in the next few days. Two new wells were started in the North Belridge field of Kern County during the past seven-day period and another, Belridge Oil Co. No. 17-35 in section 35-27-20, should begin making hole within the next fortnight. The two new wells spudded in at North Belridge during the past week were No. 7 Result of the Continental Oil Co. and the Standard Oil Co. No. 4 McPhail in section 36-27-20. Speik Oil Co. has abandoned its wildcat south of Bakersfield in Kern County at 6,121 feet due to the unfavorable outlook. Ohio Oil Co. is running a formation tester in No. 5-A on the Kern County Land Co.'s property in the Buena Vista Lake gas field of Kern County and if the results are satisfactory a water string will be landed in this well within the next few days preparatory to the making of a production test. The General Petroleum has started cleaning out its wildcat in the Elk Hills district of Kern County which it took over from the Doyle Petroleum Co. a month or two ago, but it will probably ue another week or 10 days before the company reaches the bottom of the hole, which is at 5,265 feet. The Texas Co. is rigging up No. 1 K.C.L. in the Fruitvale field and will probably begin making hole within the next day or so. The Western Gulf, discoverer of the Fruitvale field, has two wells standing cemented on top of the pay in this field and both of them, No. 18-B and No. 19-B on Kern County Land Co. property, should be tanking oil in the immediate future. The General Petroleum Corp. No. 2 Hensley in section 22-29-27 and the Harrison Oil Co. No. 1 in section 23-29-27 should also be given early production tests. The Standard Oil Co. has started bailing operations on No. 5-2 on Kern County Land Co. property in section 24-29-27 following completion at 4,418 feet and, consequently, this well may increase the list of producers in the Fruitvale field within the next few days.

Kettleman Hills

Union Oil Co. is expected to write finis to its attempt to develop Eocene production in the north dome of Kettleman Hills within another few weeks as No. 1 Lillis-Welsh is scheduled for abandonment. The hole has already been plugged back from 11,147 feet to 10,750 feet and the company will make a series of production tests on the way out by perforating the 8⅝-inch at frequent intervals. This is only a precautionary measure, however, as the company's field department does not hold out much hope of getting production. One of the most interesting features in connection with this well is the fact that the Union has been unable to locate the showings of oil and gas which were found at approximately 10,999 feet by the North Kettleman Oil & Gas Co. before the Union took over the hole and redrilled it.

The Petroleum Securities has resumed drilling operations in No. 1 Burbank in Kettleman Middle dome of Kettleman Hills and a further attempt will be made to recover the drill pipe which was lost about two years or so ago. No. 1 Burbank was the first well to reveal the existence of oil and gas in the Kettleman Middle Dome field but mechanical trouble prevented a production test. Approximately $1,000,000 has been spent in drilling operations and subsequent fishing on this well in an effort to complete it as a producing well. This project is located in section 30-23-19 and had been bottomed at 9,332 feet when mechanical trouble developed. The Standard Oil Co. has several potential producers nearing completion in the Kettleman North Dome field and two of them should be tanking oil in the near future. Kenda also has several new wells approaching completion.

Round Mountain

Two new wells were completed in the Round Mountain field of Kern County this week and one of them registered substantial production. This was the Shell Oil Co. No. 3 on Olcese lease No. 1 which was brought in pumping 1,321 bbls. of exceptionally clean 17.4 gravity oil per day following completion at 1,531 feet after the hole had been finished with a 6⅝-inch liner carrying 206 feet of perforated. The California Western Oil Co. No. 13 in section 7-28-29 was good for 398 bbls. per day on the beam from 1,531 feet following completion of the hole with a 6⅝-inch liner including 21 feet of perforated. Several new wells are nearing completion in the Kern River field and it appears quite probable that a number of others should also be finished in the Midway-Sunset and Mount Poso fields in the near future. During the present week the General Petroleum Corp. completed its No. 18 Mid-North in the Midway-Sunset field of Kern County and the Quality Oil Co. put its No. 1 W. P. on a production test along about the same time. The former well was finished pumping 120 bbls. of relatively clean 26.1 gravity oil per day from 3,704 feet while the latter was completed pumping 88 bbls. of 12.8 gravity oil per day from 1,545 feet.

The Standard Oil Co. finished an excellent well in the Inglewood field of Los Angeles Basin a few days ago when No. 23 Rubel was brought in flowing 2,705 bbls. of unusually clean 32.1 gravity oil per day from 4,040 feet after the hole had been finished with a 6⅝-inch liner which carried perforations at 3,390-3,586 feet, 3,725-3,873 feet and at 3,934-4,018 feet. This new well belongs to the Shell and K. & I. Corp., which concerns purchased the entire holdings of the Pacific Western Oil Co. in this field last year. By mutual agreement, the Standard Oil Co. was designated to develop and operate the lease due to its extensive holdings in this field and also because this company owns one-half interest in the K. & I. Corp. Union Oil Co. added a new well to its list of producers in the Dominguez field of Los Angeles Basin a day or so ago when No. 40 Hellman was brought in flowing 865 bbls. of clean 30.1 gravity oil and 600,000 feet of gas per day from the second Callender zone at 4,440 feet. In the Huntington Beach field, H. S. Woolner completed his No. 2 fee pumping 135 bbls. of 24.1 gravity oil per day from 4,304 feet after the hole had been finished with a 6⅝-inch liner, 565 feet of which was perforated.

New Pool in Kentucky

SONORA, Ky., Feb. 10.—Duff, Bland & Porter, local operators, completed No. 2 Jim Priddy, 5½ miles west of this place and it is reported good for 30 bbls. an hour.

Completions and Operations in New York-Pennsylvania Gas Field

By R. C. CONINE

COUDERSPORT, Pa., Feb. 8.—There were three completions in the Oriskany gas sand fields of Pennsylvania and New York during the week ending February 7. In New York, Schrack and others completed a test on the Lewis and Knox property, Alma Township, Allegany County, at a total depth of 4,410 feet for an estimated production of 30,000,000 feet. First gas was found at 4,400 feet and second gas at 4,404 feet. Initial rock pressure was 1,800 pounds. Trumbull's test on the Baker and Rifer property, Aurelius Township, Cayuga County, gauged 30,000 feet at a depth of 1,850 feet. In Pennsylvania, Hanley and Bird No. 2 Burd, Allegany Township, Potter County, came in for 17,000,000 feet and was completed at a total depth of 5,344 feet. Top of the sand was reached at 5,340 feet. Initial rock pressure 1,418 pounds.

Pennsylvania Operations

Producers Power & Light Co. was drilling at 3,095 feet on the Joe Trimmer farm, Clymer Township, Tioga County. Godfrey L. Cabot was drilling at 573 feet on the H. Decker farm, Westfield Township, same county, after casing to 555 feet. P. P. & L. Co. was drilling at 320 feet on the Francis Johnson farm, Clymer Township, same county. Potter Development Co. was drilling at 108 feet on the A. Karhan farm, same township and county. Godfrey L. Cabot was drilling at 5,135 feet on the Duke estate property, Genesee Township, Potter County. Miller Ake was shut down at 3,810 feet on the Walter Burrell farm, same township and county. Potter Development Co. was drilling at 4,960 feet on the same farm.

New York Operations

Belmont Quadrangle Development Co. was shut down at 100 feet on the Thomas Burns farm, Alma Township, Allegany County. Decker and others were drilling at 2,050 feet on the No. 2 Burns, same township and county. Godfrey L. Cabot was drilling at 3,980 feet on the Gillette farm, Amity Township, same county. Wyoga Oil & Gas Co. was casing at 4,590 feet on the Henry Knox farm, Willing Township, same county. Utica Natural Gas Co. was shut down at 875 feet on the William Grimm farm, Western Township, Oneida County. Property Shares was shut down at 950 feet on the R. Skinner farm, Westmoreland Township, same county. Wittmer Oil & Gas Co. was shut down at 4,375 feet on the G. Losey farm, Danville Township, Steuben County. Belmont Quadrangle Development Co. was building a rig on the J. O'Hara farm, Willing Township, Allegany County. Cunningham Natural Gas Co. was moving in on the same farm.

East Texas Fields

(Continued from Page 51)

L. Price, 3,708-3,800 feet, 20 bbls. in 23 minutes, 2-inch choke; No. 17 A. L. Walker, 3,638-3,652 feet, 64 bbls. per hour. Marathon Oil Co. No. 11 D. W. Griffin, 3,643-3,700 feet, 24 bbls. per hour; No. 3 S. Overton, 3,638-3,639 feet, swabbing 10 bbls. oil and 60 bbls. salt water. Milford Oil Co. No. 9 A. P. Finney, 3,616-3,681 feet, 20 bbls. in 20 minutes.

Walker Murray No. 1 Curbo, total depth 960 feet, abandoned. Sinclair Prairie No. 17-B Mayfield, 3,614-3,621 feet, 32 bbls. in 15 minutes. Stanolind-Pure No. 60 Siler, 3,647-3,657 feet, 16 bbls. in 35 minutes, three-quarters inch choke. Sun Oil Co. No. 7-B Schuler, 3,625-3,691 feet, 20 bbls. per hour. Union Oil Co. No. 3 Tollivar, 3,705-3,770 feet, 40 bbls. per hour.

Cherokee County

Pete Hoffman No. 1 L. Stubblefield, 3,645-3,646 feet, 3,000 feet salt water in hole, abandoned.

Smith County

Magnolia Petroleum Co. No. 34 J. R. Wright, 3,668-3,680 feet, 28 bbls. in 15 minutes. Sinclair Prairie No. 54-A Mayfield, 3,829-3,830 feet, 20 bbls. in 15 minutes. Sun Oil Co. No. 4 M. Burns, 3,746-3,747 feet, 30 bbls. in 50 minutes.

Upshur County

Danciger Oil Co. No. 6 T. B. Stinchcomb, 3,730-3,729 feet, 80 bbls. per hour. Day Oil Co. No. 2 Victory, 3,582-3,584 feet, 20 bbls. in 15 minutes. Elm Oil Co. and others No. 4 L. Walker, 3,590-3,618 feet, 130 bbls. in two hours. Jim Wood No. 2 A. B. Mackey, 3,724-3,733 feet, 20 bbls. in 25 minutes.

MISCELLANEOUS COMPLETIONS

Anderson County—Cayuga Field

Tide Water and Seaboard Oil Co. No. 5 Edens, total depth 4,081 feet, 133 bbls. in 24 hours through one-eighth inch choke.

Long Lake Area

Tide Water and Seaboard Oil Co. No. 4 Shaw & Cern, total depth 5,347 feet, 143 bbls. in 24 hours through one-eighth inch choke.

Gregg County

Millard Oil Co. No. 1 Williams, dry and abandoned 3,820 feet.

Lamar County

North Texas Syndicate No. 1 Wright, dry and abandoned 2,702 feet, elevation 460 feet, 7 miles northwest of Paris. Texas Gulf Production Co. No. 1 Darnell, dry and abandoned 2,620 feet, top Georgetown lime 1,365 feet, top Woodbine 928 feet, 4 miles northeast of Paris.

Van Zandt County

Pure Oil Co. No. 4 Enas, total depth 2,954 feet, 38 bbls. first 10 hours, pumping; No. 8 Russell, total depth 2,969 feet, 20 bbls. per day pumping.

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Eastern Field Report

GOOD WELLS IN PERRY AND LICKING COUNTIES IN OHIO

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Feb. 10.—Although still considerably retarded by cold weather, operations improved during the past week in the lower eastern fields. Eighteen operations were completed of which four were dry holes, five gas wells, and nine were producers. Most of the new production was in Southeast Ohio.

Good producers were completed during the past week in both Licking County and Perry County, in southeastern Ohio. In Licking County, Hanover Township is now the scene of a new extension. In the SE quarter of section 17, Pure Oil Co. completed a test on the P. J. Primrose farm in the Clinton sand at a depth of 3,070 feet and it produced 150 bbls. the first day after shot. In the SW quarter of this section the same company completed a second test on the Amy F. Nethers farm in the Clinton sand at a depth of 3,176 feet. It produced 70 bbls. the first day after shot. In the NW quarter of section 19, same township, the Edward H. Everett Co. completed a second test on the Jacob J. Nethers heirs farm in the same formation at a depth of 3,195 feet. This well started off at 15 bbls. after being shot.

There were two other completions in Licking County. In section 2, Perry Township, the McClay Brothers have a gas well in No. 5 Emmett E. and Olive M. Hoover in the Clinton sand at 2,831-51 feet. It gauged 175,000 feet per day. In the NW quarter of section 2, Franklin Township, E. R. Adams and others completed a 1-bbl. pumper on the Lina Rine farm in the Berea sand at a depth of 680 feet.

In Perry County there was another fair completion. In the SE quarter of section 25, Coal Township, the Kachelmacher estate completed No. 11 Hemlock Coal Co. in the Clinton sand at 3,610 feet. It produced 105 bbls. the first day after shot.

In Hocking County the Preston Oil Co. completed No. 1,503 Sunday Creek Coal Co., SE quarter of section 6, Ward Township, in Clinton sand at 3,573 feet, and it produced 35 bbls. the first day after shot.

In Jefferson County, Altamount Oil Co. drilled No. 4 Elmer Hardy, NW quarter section 28, Steubenville Township, through Berea sand to 1,500 feet. It was a dry hole.

In Knox County, J. B. Reed completed a gasser on the William E. Seymour farm in section 15, Pike Township, in the Clinton sand. It gauged 600,000 feet a day. The total depth was 2,654 feet.

In Meigs County, the Meigs Developing Co. drilled a test on the Charles Russ farm, NW quarter of section 30, Lebanon Township, through Berea sand to 1,914 feet. It was a dry hole. In the southeast part of Lot 1,168 of this township, the same company drilled a test on the C. M. Hoback farm to 1,921 feet, through the Berea sand, and it was dry.

In Washington County, D. T. Orndoff completed a well on the Rufus Beach farm 2 miles south of Watertown, Lot 753, Barlow Township, in the Big Mahoning sand at 796 feet. It produced 5 bbls. the first day and was not improved by shot. One-half mile east of Barlow in section 25, Barlow Township, Howard MacTaggart and others completed a well on the T. E. Barrett farm in the Berea sand at a depth of 1,831 feet. It is a small gas well gauging 30,000 feet a day.

SOUTHWEST PENNSYLVANIA

There was one completion in Southwest Pennsylvania during the week and it was a fair gas well. In Amwell Township, Washington County, A. V. Lewis and others completed a test on the George Thomas (Hatfield) farm in the Fourth sand and it gauges 1,332,000 feet a day, natural. The top of the Fourth sand was at 2,905 feet and gas was struck at 2,910 feet.

This test is along the Fifth sand oil streak and, like the test on the B. A. Bonham (Clarissa Ramsey) farm, stopped short of the Fifth sand with a heavy gas volume in the Fourth sand. The rock pressure in the Thomas test is 935 pounds. The new completion is located just northeast of the W. Dodd producer completed a couple of months ago, and just northeast of Chambers Dam. If the gas in either of these two tests fails, the wells will be drilled down to the Fifth sand for the oil as this territory is well protected by their leases.

The same operators are now preparing a location for a test on the Bronder tract south of and adjoining the George Thomas farm. Heasley Brothers are the contractors.

In this township, Foley & Fox are drilling on the Fred Thomas (Weir Rutan) farm and have reached 2,025 feet. The Union Gasoline & Oil Corp. is down 700 feet on the A. O. VanKirk heirs (McClenathan) farm and are building the rig on the Thomas Bebout farm.

In South Franklin Township, William Bungard & Co. is drilling on the Clyde Hinerman farm which has reached 1,945 feet. E. H. and J. B. Tague remain shut down on the Hiram McClain farm at 2,442 feet. In South Strabane Township, seeking a Fifth sand extension to the north, Victor D. Behm & Co. are drilling a test on the William Paul & Son farm, but are at present shut down for engine repairs.

In East Finley Township, Washington County, Plants Stewart & Co. are drilling on their own 30 acres and have shut down at 1,900 feet. In Cecil Township, Washington County, George N. Glass is drilling past the 1,000-foot level in a test on the Wallace MacEwen farm.

In Allegheny County, Ferguson & Henderson are drilling on the Lucy Schram farm in McCandless Township and the hole is 700 feet deep. In Harmar Township, J. F. Trees and others are down 1,000 feet on the Bauman heirs farm.

In Greene County, Manufacturers Light & Heat Co. is below 1,020 feet in a test on the S. S. Leslie farm in Richhill Township and started spudding in but shut down on the Lyons tract. Here Daniel Finnegan has started to deepen No. 1 Walter Rail. Lewis & Co. are drilling out cement at 1,600 feet in a test on the Samuel Chess farm.

Near Millsboro in East Bethlehem Township, Washington County, James R. Hagerman and others have reached a depth of 1,030 feet in a test on the Emory heirs farm.

WEST VIRGINIA

Two small producers, one gas well and one dry hole was the total new work in West Virginia during the week. This section was harder hit by the storm and cold weather than the other districts of the eastern fields.

In Pleasants County, Dr. C. L. Barron completed No. 5 James and L. R. Roberts, in Grant district in the Second Salt sand at a depth of 618 feet. It is a 2-bbl. pumper.

In Ritchie County, Ralph C. Jackson completed No. 2 S. and L. E. Tennant, in Grant district at 2,039 feet. It is a 2-bbl. pumper from Maxon sand.

In Cabell County, C. G. Peck and others completed a test on their own property in Guyandotte district as a gas well, total depth 3,013 feet. The Big Lime was at 1,297-1,429 feet; the Big Injun sand, 1,491-1,583 feet; the Berea sand at 2,075-92 feet; Gas, 2,080-85 feet; Brown shale, 2,115-3,008 feet, with gas at 2,818-2,910 feet. The total volume is 145,000 feet a day.

In Wirt County, W. C. Patterson drilled No. 25 on the J. C. Hale farm in Clay district through the Injun sand to a depth of 1,285 feet and it was dry.

Deep Tests

In Loudin district, Kanawha County, there is a showing of 260,000 feet of gas in the test of the Columbian Carbon Co. on the S. H. Hoge farm at a depth of 4,980 feet. H. C. Zogg and others have reached 3,747 feet in the R. H. Dunn test.

In Malden district, Godfrey L. Cabot, Inc., is down 3,387 feet on the William B. Tompkins test and 4,335 feet on the N. B. Tompkins farm. The South Penn Oil Co. is making fair progress in the No. 2 on the Kate Scott farm.

In Elk district, the Columbian Carbon Co. is rigging up the test on the Elkland Improvement Co. tract. The test on the M. M. Robertson is drilling at 500 feet. No. 3 on the G. and D. Copenhaver farm is drilling at 1,450 feet and the No. 4 at 3,100 feet. This company's test on the W. H. Baxter and others lease is fishing at 2,850 feet.

In Boone County, Pure Oil Co. has reached a depth of 2,173 feet in No. 41 Lafollette, Robson & Prichard Tract B and C, in Sherman district. On the Federal Coal Co. tract this company is down 825 feet in the No. 80. In Peytonia district, the Owens Illinois Glass Co. has reached 1,690 feet on the Peytonia Coal Land Co. lease. This company's No. 3 on the J. G. Roberts farm in Washington district is drilling at 1,871 feet. In Scott district, their second test on the Mamie Ballard farm is being rigged up. The Pond Fork Oil & Gas Co.'s deep test on the Cole & Crane lease is still shut down at 4,566 feet waiting on a new line.

In Cabell County, the Merritts Creek Gas Co. is rigging up the test on the David Gideon farm in Guyandotte district. In Barboursville district its test on the Stella U. Farr farm is drilling at 2,750 feet. In McComas district, the Kanawha West Virginia Gas Co. is rigging up on the W. E. Farley farm, and has reached a depth of 1,260 feet in the R. N. Heath test, which is caving at that depth. Pridemore & Adkins are drilling at 1,100 feet in the Lucas heirs No. 1. The Empire State Gas Co. is down 1,700 feet in a test on the Fay Savage farm.

In Clay County, the Virginian Gasoline & Oil Corp. is building a rig for No. 32 Brown, Swan, Goshorn & Geary tract, in Henry district, and hauled in material for No. 33. This has been a most prolific development with no wells producing less than 12 bbls. a day, initially.

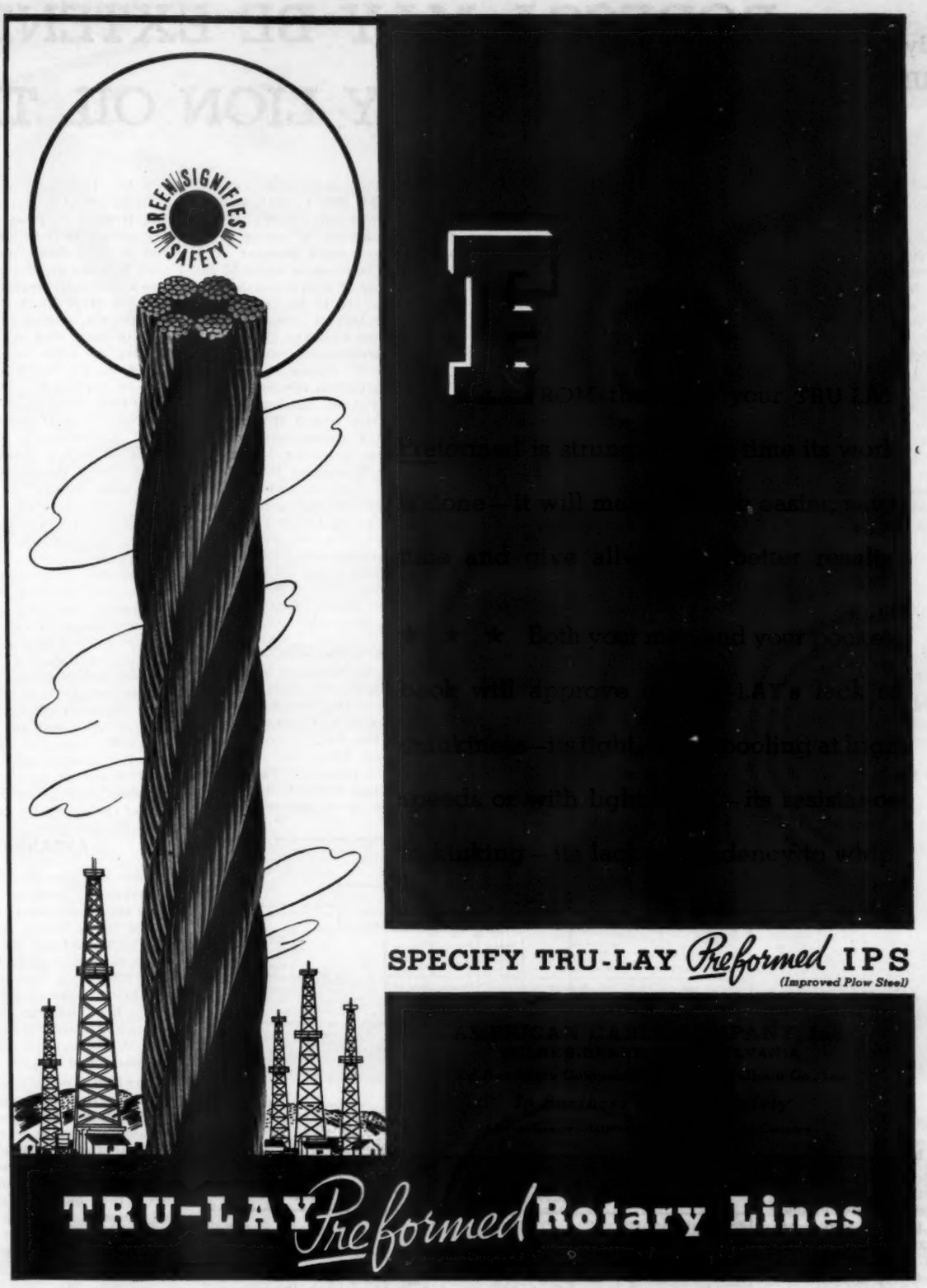
In Gilmer County, E. D. Norman and others are drilling at 1,400 feet in the test on the Everett Collins farm in DeKalb district.

In Kanawha County, the West Virginia Gas Corp. is drilling No. 13 on the C. M. and Lizzie Caldwell farm and has reached 1,050 feet. The location is in Union district.

In Wetzel County, Null & Moorehead have started drilling a test on the F. Himelrick farm in Church district which is 200 feet deep. The Maxon Oil & Gas Co. is down 1,250 feet in a second test on the E. H. Huffman farm in this district.

After Station Burglars

Burglars who break into Continental Oil Co. service stations and bulk stations have caused the company to employ specially trained investigators to cooperate with local officers. The company has already succeeded in apprehending and securing the conviction of a number of bulk station burglars, many of them having previous criminal records.



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North Louisiana, Arkansas

RODESSA MAY BE EXTENDED TWO MILES BY LION OIL TEST

By J. R. CRUMPTON

SHREVEPORT, La., Feb. 10.—Drilling operations in the North Louisiana and Arkansas districts slowed down to a minimum during the past week due to the extremely cold weather. Only seven completions were reported from both divisions and numerous wildcats have been shut down for the past seven days.

However, the geophysical crews were going at high speed over the entire Northwest Louisiana area and several hot spots cropped up with resultant leasing and royalty plays. This district is getting a greater wildcat play than it did following the discovery of the Homer field in Claiborne Parish in the early part of 1919. The exploration is being carried on from a scientific standpoint entirely with seismographic surveys for anhydrite highs. Every wildcat test of any importance carries a drilling contract to the Oolitic lime horizon of the Glen Rose series in the Upper Trinity which produces in the Rodessa field of Caddo Parish. A number of the tests are being drilled below the lime horizon in search of sand in the lower Trinity.

Estimated Production

Estimated daily gross production all companies week ending February 7, 1936:

NORTH LOUISIANA

Bellevue	450
Caddo Light	4,100
Caddo Heavy	2,305
Converse	1,155
Cotton Valley	205
De Soto and Red River	1,320
Elm Grove	360
Haynesville	3,360
Holly	155
Homer	2,590
Pleasant Hill	165
Rodessa	40,670
Sarepta-Carterville	515
Urania	2,635
Zwolle	1,320
Total	61,305

SOUTH ARKANSAS

Champagnolle	2,780
El Dorado	2,140
Lisbon	305
Miller County	1,250
Nevada	860
Smackover Light	2,140
Smackover Heavy	17,545
Stephens	595
Urbana	2,055
Total	29,670

Results in Rodessa

The Rodessa field furnished four of the five completions in the North Louisiana district. Haynes Production Co. No. 7 Lawton, section 14-23-16, flowed 200 bbls. per hour through 1¼-inch choke from a total depth of 6,006 feet. Top of saturation was logged at 5,980 feet and casing pressure registered 700 pounds.

The prolific section 14 furnished two other good wells. United Gas Public Service Co. No. 1 Tyson unit made 47 bbls. per hour through one-half inch tubing choke from 6,020 feet, tubing pressure registering 200 pounds and casing pressure 625 pounds. Its No. 2 Tyson unit was a 44-bbl. per hour producer on one-half inch tubing choke from total depth of 6,025 feet. Top of saturation was contacted at 5,978 feet, tubing pressure 150 pounds and casing pressure 500 pounds. The same company's No. 4 Tyson unit, section 13-23-16, made 55 bbls. per hour through one-half inch tubing choke from 6,025 feet. Tubing pressure was 1,350 pounds and casing pressure 1,500 pounds.

A shallow wildcat test in Jackson Parish, George W. Zeigan No. 3 Louisiana-Central Lumber Co., section 26-14-1w, was dry and abandoned at 1,764 feet.

The northeastern trend of the Rodessa field is getting an extensive drilling play. Lion Oil Refining Co. No. 1 J. M. Wynn, section 9-23-15, and a potential 2-mile extension to the northeast, is coring for the Dees sand at 6,092 feet. The well logged Hill sand at 5,862 feet and Gloyd sand at 5,979 feet. It has all the earmarks of being a producer. Bartex Pipe Line Co. No. 1 Norton estate was recently completed as a good producer in the eastern part of section 18-23-15 and extended the field about 1½ miles.

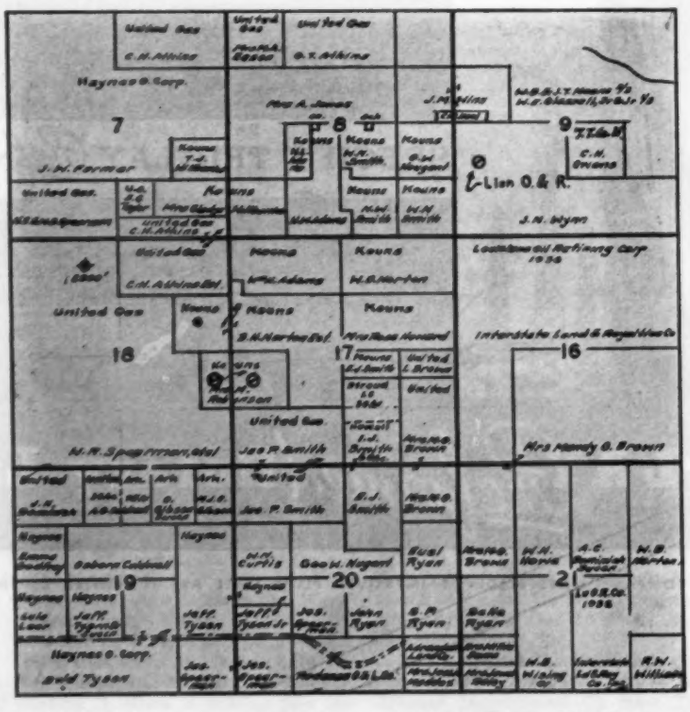
Seek Northwest Extension

North and west of production, Haynes Production Co. No. 1 Zylks, in the SE cor. of section 9-23-16, is being closely watched for possible extension in that direction. The test is 2 miles north of the discovery well of the field and 1 mile west of Vaughn Production Co. No. 1 Comegys in the SE cor. of section 10 and which made a small producer. It is reported to be checking about 55 feet higher on top of anhydrites than the Vaughn well and if this continues to the pay horizon it should make a good producer from the Young sand. On the southwestern trend in Cass County, R. W. Norton No. 1 Mary Rives, John Collum Survey, is nearing the pay zone, reaming at 5,839 feet. The test topped Hill sand at 5,666 feet. A wildcat southwest in Cass County, American Liberty Oil Co. No. 1 J. B. Rodgers, C. M. Robinson Survey, had an estimated gas flow of 3,000,000 feet through one-quarter choke on tubing from 5,800 to 5,830 feet. The hole was plugged back and casing shot at this depth from old total depth of 7,010 feet. The gas production is believed coming from the Hill sand, first producing sand in the field.

Among the Wildcats

The wildcats developed little of interest in this district during the past week. Some of the operations follow: De Soto Parish, S. S. Alexander No. 1 Stell, section 5-12-16, arranging to set casing at 4,809 feet; Clarke & Stiller No. 1 Logan Oil Co., section 17-10-12, tested 5,000,000 feet of gas at 3,280 feet; A. G. Halbach and others No. 1 Staton, section 29-13-14, drilling at 3,150 feet; Lincoln Parish, Herman L. Brown No. 1 Gardner, section 10-17-4w, drilling at 1,930 feet in black shale; Bienville Parish, Gulf Refining Co. is rigging up on on No. 1 Thrasher, section 13-15-7; Lide Greer & Marr No. 1 Davis Brothers Lumber Co., section 12-16-5w, logged base of chalk rock at 2,792 feet and drilling at 3,090 feet; Texas Seaboard Oil Co. No. 1 McGee, section 3-16-6w, drilling in shale and lime at 4,620 feet; Webster Parish, Ohio Oil Co. No. 1 R. L. Holloway, section 23-21-10, is arranging to set second string of casing below 5,200 feet; Winn Parish, Parsons and others No. 1 Tremont Lumber Co., section 10-12-2w, drilling in chalk rock at 3,635 feet.

As a result of several seismographic surveys, a leasing campaign was started last week centering around section 10-18-10, Webster Parish. It is reported that Tide Water Oil Co. is doing the blocking and the leases include a block previously assembled in this area and on which a shallow test was drilled during the past year. The leases carry no drilling obligation. Standard Oil Co. of Louisiana is reported to have completed a seismographic survey of an area in De Soto Parish centering around section 24-11-14 and to have established an anhydrite high about 2 miles southeast of the old Spider gas field.



Lion Oil Refining Co. test in section 9-23-15w, Caddo Parish, is expected to give a 2-mile extension to the Rodessa field

ARKANSAS

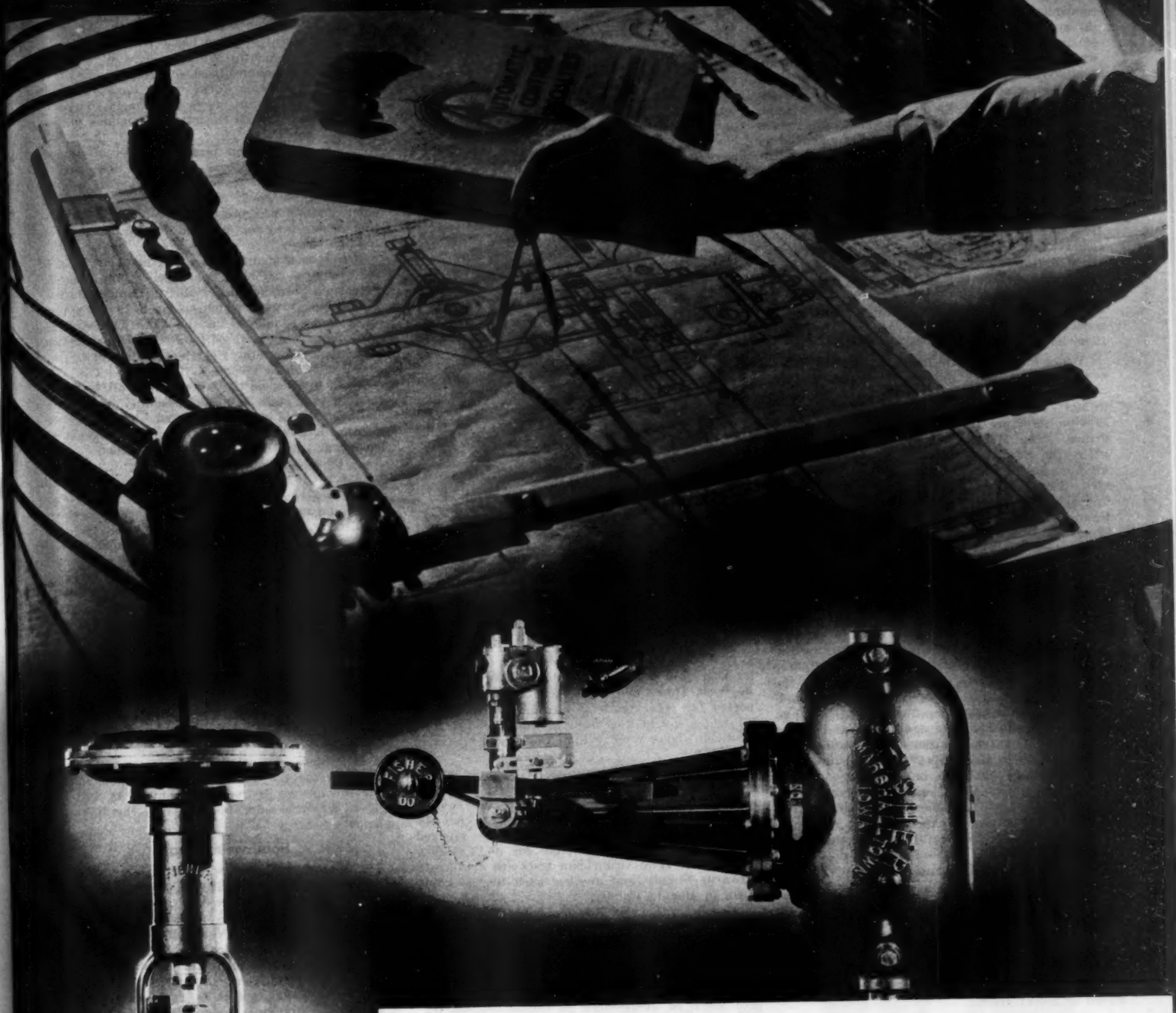
There was very little field activity in Arkansas, most of the wildcats being shut down due to cold weather. In the Miller County field, M. H. S. Oil Co. No. 2 Beck, section 34-15-26, was completed pumping 60 bbls. daily from 2,928 feet. The Rainbow field in Union County registered a dry hole. Root Refining Co. and G. W. James No. 1 M. W. Sullivant, section 12-17-14, encountered salt water and was abandoned at 3,305 feet.

Crawford County, in the northwestern part of the state, is reported to be getting a good lease play with the assurance of at least one test in the near future. Carter Oil Co. is reported to be about ready to spud in on a test located about midway between the towns of Mountainburg and Chester. This area is about 25 miles northwest of Fort Smith. The well will be drilled to the Wilcox sand, expected around the 3,500-foot level.

Phillips Petroleum Co. No. 1 J. D. Reynolds, section 27-15-15, Ouachita County, a deep test, is reaming to bottom in an attempt to straighten the hole which was found to be 9 per cent off at 1,668 feet. Hempstead County is coming back into the active wildcatting list after being inactive

(Continued on Page 79)

SCIENTIFIC ENGINEERING



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MARSHALLTOWN, IOWA

Few Large Pools Are Found During the Past Five Years

(Continued from Page 10)

ready named, the Ramsey Petroleum Corp., the Independent Oil & Gas Co., the Magnolia Petroleum Co., the California Co., the Stanolind Oil & Gas Co., and numerous individuals and smaller companies have large holdings. Extending on to the northwest in Morgan and Weld Counties most of the acreage leased when the Greasewood pool was discovered several years ago is still held under 10-year commercial leases. Lincoln County also is in the active area and the leasing has extended as far west as El Paso County, east of Colorado Springs, and then southward into Pueblo County. In the north the leasing has extended as far west as Larimer County, where the California Co. has started a Sundance test just south of the Wyoming line and north of the Wellington pool. In addition to the tests named, the Glenridge Oil Corp. is expected to complete this year the old Hills dome well in section 27-3s-64, in Adams County, and the Consolidated Smelting & Metals Co. will finish its test in the Haswell district in Lincoln County in section 7-17s-52. While it is reported that appropriations have been made by major companies for at least three wells in the general eastern Colorado area, none of these locations have been officially released.

While other parts of the state will hardly be as active as eastern Colorado, the Ohio Oil Co. will test the Bell Rock structure, west of Craig, in Moffat County, and one and probably two wildcats on structure in Rio Blanco County will be drilled. The Hartsel district, in Park County, where the South Park Oil Co. has a well under way, has a second test by the same company scheduled. There will be some wildcatting in Archuleta County west of the discoveries of the William E. Hughes estate in the Price district across the line in northern New Mexico. The Hughes estate owns the land to the east of the discovery in fee and that company will be the only driller on that side of the river.

Wyoming

In Wyoming leasing has shown a large increase as a result of the big Sundance discoveries in Lance Creek and Big Medicine Bow and in the Dakota at Quealy, this activity being largely in the southern, southeastern and eastern parts of the state. Lance Creek is expected to have two wildcats drilled on the eastern end of the anticline and the testing of the Shawnee structure near Douglas in Converse County is expected to go ahead this year. Another structure between that area and Lance Creek is likely to have a test and the Amerada Petroleum Corp. has taken a large block to the southwest of Cheyenne. Outside of the area mentioned wildcatting is expected to go ahead on about the same scale as in the past in other parts of the state.

Montana

Montana wildcatting will be directed principally toward proving extensions of the Cut Bank pool to the south and southeast, principally in Pondera County, where the Texas Co. already is drilling its second wildcat. There is no other definite trend for a wildcat play in Montana, although it is expected that the number of tests drilled will go ahead of recent years.

Eastern Texas

One strike last year that will have the most bearing on future wildcatting, especially deep wildcat exploration in East and East Central Texas, was the Trinity sand discovery of the Tide Water Oil Co. and Seaboard Oil Co. in the Cayuga field in northwest Anderson County. The completion of a deep gasser and distillate producer from the Trinity sand series, has caused companies and individuals to reblock and lease acreage in old areas condemned for Woodbine sand production by dry holes. The majority of these old blocks and tests are located on likely looking structures, but proved barren in the regular pay zone for the districts. However, this shallower drilling does not condemn the areas as to deeper production. The Camp Hill pool, discovered by the Gulf Production Co. on Davey and Royall lands about 7 miles southeast of Palestine in Anderson County, is expected to get a Trinity sand test this year. Wells in this pool are now producing from three sands, the Carrizo or shallow sand; sub-Clarksville, a member of the Eagleford; and the Woodbine sand, all of which makes the Trinity sand look promising.

West Central Texas

Hamilton County, in the West Central Texas district, which has been seen but little wildcatting in the past, and in which there is no production, came into the limelight in December when operators started blocking and leasing in that county. Several areas were surveyed by geophysical and seismograph instruments, and blocks taken as the results of their findings. The Seaboard Oil Co. is now preparing to drill a well near Pottsville on a large block and Walter Gant of Ardmore is preparing to drill a 4,000-foot test on an 11,000-acre block near Blanket. Other tests are proposed, one reported for a block several miles east of Hamilton near a block held by the Tide Water Oil Co.

Two wildcats of interest in eastern Shackelford County are now being drilled to the Ellenberger. Roeser & Pendleton and Merry Brothers & Perini are drilling one north of the Ibex pool and Pitzer & West and Humble Oil & Refining Co. are drilling to the east on the De La Fosse ranch near a test which Pitzer & West drilled last year, but which had to be junked. It was certain of making a commercial producer from the Ellenberger, which makes the second test of extreme importance, especially since the oil is high gravity and from a deep sand. A new deep field will be opened during the fore part of 1936, probably in February.

An interesting test is drilling in Eastland County about 5 miles south of Cisco in section 62 on a 3,200-acre block in Block 3, H.&T.C. Survey. It is to go to 3,500 feet.

Wilbarger County is expected to get a 6,000-foot test on a 5,000-acre block centering in section 46, Block 12, H.&T.C. Survey, between the Red and Pease Rivers. The test, is primarily scheduled to go only to 3,500 feet, but may be carried to the greater depth.

Humble Oil & Refining Co. is preparing to drill a 4,000-foot test about 8 miles north of the Les. K. Johnson or Thalia pool in western Foard County and another similar-depth test is to be drilled in the western half of the county.

West Texas

There are 14 deep or Ordovician tests drilling in West Texas and others are rumored and reported for other parts of the district, the deeper oil being sought for reserves and because it is of much higher quality than the regular Permian lime oil.

A deep gasser was brought in 9 miles southeast of Eldorado in Schleicher County last year and one other deep test is drilling in this county, with one preparing to spud in soon. The discovery was drilled to 6,257 feet but was plugged back to 5,540 feet to complete for a 13,800,000-foot gasser. Two Ordovician tests are drilling in Edwards County and another such test is going down in Menard County.

Boone Brothers of Houston have assembled an 11,000-acre block just south of Stanton in the southeastern part of Martin County and a test is to be put down at once. The Shasta Oil Co. will drill the block.

A deep test has been proposed for the Boren pool south of Justiceburg in Garza County, but no location has yet been announced.

In Terry County, a wildcat is to be put down in section 23, Block T, D.&W. Railway Survey, on the Brownfield ranch, by the Danube Oil Corp.

Culberson County is the scene of a deep test on an extremely large block leased by Anderson Prichard Oil Corp., of Oklahoma City. The Magnolia Petroleum Co. purchased a substantial interest in the block and test which is now down below 4,200 feet.

Concho County saw the starting of two Ordovician tests late in 1935, but they have been slow in drilling and are attracting but little attention.

Gulf Coast

The bulk of the exploration work in the Gulf Coast fields, which was for many years centered in Texas, has shifted to South Louisiana and that part of the big area will be given a very thorough going over in the future as it contains immense potentialities.

In the southwestern part of Louisiana development has been fairly extensive, but as a whole wildcatting has been rather scattered. The swampy and marshy conditions which exist over much of the extreme southern lower central and southeastern part of Louisiana have not been conducive to development.

The larger companies in particular are going into southern Louisiana, especially in the southeastern portion, on a widespread scale. An intensive geophysical program has been under way for a number of months with no signs of a let-up. Among the companies most active in this has been the Shell Petroleum Corp., which has had nearly as many geophysical crews working in southeastern Louisiana as all the other companies put together.

As a result of this play, a number of promising salt dome prospects have been indicated, a great amount of acreage has been leased, and on many of these newly found prospects, as well as older undeveloped prospects, deep tests are getting under way or will be drilled during the coming year.

Of especial significance as far as exploration is concerned is the new field opened by Amerada Petroleum Corp. at Cheneyville, in Rapides Parish. The discovery well, which so far is the only producer, was completed in the Cockfield sand at 5,700 feet. This is the first Cockfield production in Louisiana and the field is the first along the so-called "Conroe trend" in Louisiana. This has centered interest on the potentialities of the Cockfield in that state and the possibility of opening additional fields along that trend. The next few months, it is anticipated, will witness a renewed leasing and drilling play along that trend.

Coastal Mississippi

Further east in coastal Mississippi, where various companies have been blocking acreage rather extensively, although more or less quietly, several important deep wildcats are getting under way and others are expected to be started shortly. The slightest favorable markers or showings in any of these no doubt will prove an incentive for an extensive wildcatting program extending across the southern part of that state and possibly Alabama, and into northwestern Florida.

The proving up of the Tepetate field, northwestern Acadia Parish, coastal Louisiana, by Continental Oil Co., has opened the way for going back over many parts of the Texas and Louisiana coast with geophysical instruments in search of other fields of that type. Geophysically, Tepetate represents a new type of field, a type which was not explained before the drilling of the field, and one which was not considered of importance. Now, since the answer is known, geophysicists will be able to interpret such anamolies in the light of a known field.

Southwest Texas

In Southwest Texas, wildcatting constitutes a large percentage of all drilling operations. The Edwards plateau is expected to receive additional tests during 1936 due to many expiring leases held there. Recent important discoveries in the lower coastal region particularly San Patricio and Nueces Counties, will incite increased wildcatting also. Active geophysical surveying in the lower Rio Grande Valley points to new operations to begin for the first time in several sections shortly. The entire Laredo district will receive its usual wildcatting activity, probably centered in Webb, Duval and Jim Wells Counties.

North Louisiana

The present trend indicates that wildcatting in North Louisiana during 1936 will be in the northwestern part of the territory, covering the parishes of Bienville, Bossier, Caddo, Claiborne, DeSoto, Jackson, Lincoln and Webster. All of this area is located on the dome or flanks of the Sabine uplift on which the best chance hinges for gas and oil production in the Trinity series. The Rodessa field has proved the existence of oil in the vicinity of fields that have been producing gas from Oolitic lime of the Glenrose series in the upper Trinity. Sligo in Bossier Parish, Cotton Valley in Webster Parish and Sugar Creek in Claiborne Parish already have a number of tests going down below this lime-gas producing horizon and which will be looking for a true sand condition in the

lower Trinity. In fact, the Rodessa field may eventually produce its greatest amount of oil below the gas-producing horizons on the updip. This would probably call for another 1,000 to 3,000 feet of drilling below the second red bed series. The Cotton Valley field has a test now going to the 10,000-foot depth if necessary, but pay is anticipated around the 7,000-foot level. All of the known shallow structures in the North Louisiana area whether proven or rank wildcat territory have or are being surveyed geophysically. It remains to be proven how the seismograph and other geophysical instruments may spot fields in this section of the state, but the fact remains that the play is following them at this time.

Arkansas

There will probably be scattered wildcatting over this entire state, but the southwest counties which lie north and northeast of the Rodessa field seem desined to get the best wildcat play. Practically all of these tests will be to the Glenrose with Miller and Lafayette Counties taking the lead. Columbia County, in the vicinity of the town of Magnolia, also has been extensively surveyed and has good geophysical reports.

Michigan

Although more widespread wildcat activities are anticipated throughout the lower peninsula of Michigan in 1936 than in any previous year along trends parallel to producing fields, as indicated early in 1935, greatest interest in five years is now centered in the possibility of deep tests below the Dundee in several proved fields.

The close relationship between crude oil prices, already higher than at any time during the past four years and expected to go higher in Michigan because of a shortage of about 50 per cent below existing crude markets, has led to new discussion and plans for deep tests.

Numerous operators are predicting deep tests in Ogemaw, Midland and Montcalm Counties on known Dundee structures already developed as the largest producing areas of the state in the Ogemaw, Porter and Crystal pools. In Ogemaw this means drilling below 2,500 to 2,800 feet. In Porter it will mean wells from 3,400 to 3,600 feet deep, and in Crystal more than 3,200 feet deep.

Although a few tests have been drilled about 200 feet below the Dundee to test the Monroe, or lower Dundee limestone in these fields, most of these have been in wells which were off structure and therefore failed to make commercial production in the Berea, Traverse or Dundee, three upper oil sands in Michigan.

Several isolated wildcats have been drilled to the Sylvania, Trenton and Clinton formations in Michigan, three of the lower formations in which oil or gas possibilities have been predicted by State Geologist R. A. Smith and his predecessor, Doctor Lane. Deep tests to these formations on structure may require 5,000- to 6,000-foot holes.

"There are at least 20 years of exploration ahead for Michigan," it was said by Doctor Smith. "We are just beginning in a business which may be flourishing here for the next 50 years."

Following northwest and southwest trends beyond or parallel to present proved fields in Central Michigan wildcatters are still hoping to find new structures in Ionia or Clinton Counties southeast of Crystal and in Osceola County northeast of the Austin Township, Mecosta County gas field.

Two wells already are drilling at the northwest extremity of another similar trend extending southeast from Mason County through Newaygo and Kent Counties. Several other wildcats are drilling on this trend.

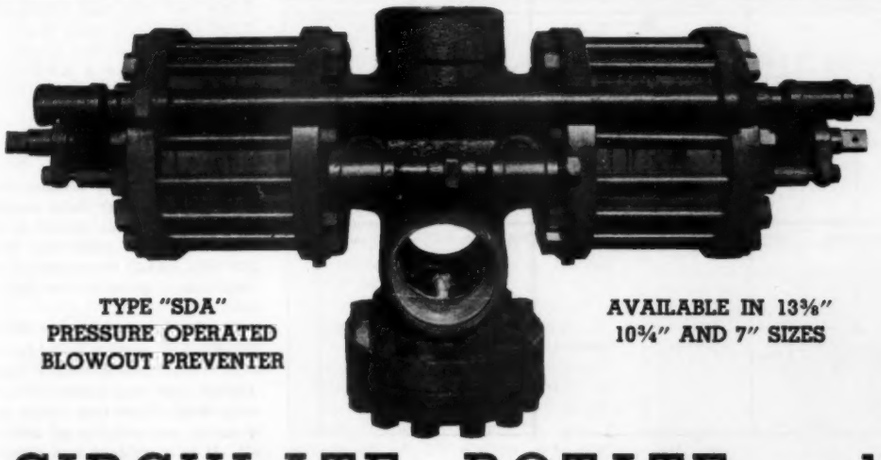
Similarly operators are planning new wildcat tests southeast of the Porter pool, Midland County, extending through Saginaw and into Gratiot and Shiawassee Counties. To the northwest this trend would extend through Gladwin, Clare, Roscommon and Wexford Counties.

New activities southeast and northwest of successful wildcat tests in Gibson Township, Bay County, Richland Township, Saginaw County and Larkin Township, Midland County, also are anticipated.

During 1935 tests were drilled in 31 of Michigan's 83 counties with more counties expected to witness oil drilling activities in 1936.

California Wildcat Work

Exploration activities in California this year will be far above last year. Geophysical exploration will be more generally used and prospectors will explore all possibly productive acreage from one end of the state to the other because new gas fields are highly desirable, every indication pointing to the probability that oil fields will be unable to meet the demand for gas within another year unless a major oil field is opened and it will therefore devolve upon gas fields to supply a large part of the natural gas necessary to meet normal demands. The bulk of development work will be centered north of the Tehachapi Mountains and in the coastal area comprising Ventura, Santa Barbara and San Luis Obispo Counties. The San Joaquin Basin has been receiving careful attention but, due to its large areal extent, geophysical exploration has only covered a few outstanding areas. Considerable leasing has been done and the largest lease recorded in several years was signed by the Barnsdall Oil Co., which after six months of negotiation, tied up a block of approximately 225,000 acres lying in Kern and San Luis Obispo Counties. This extensive lease will be given a complete geophysical survey and, due to the large amount of acreage involved, it may be another six months before preliminary work has been completed. The Western Gulf Oil Co. holds the next largest block of possibly productive acreage in California at the present time, but this company is gradually quitclaiming the least desirable of its holdings. The Western Gulf's large block is located along the western rim of the San Joaquin Valley a few miles north of the Coalinga field of Fresno County, but only approximately 50,000 acres of the initial block of 100,000 acres has been retained for future exploration. This company has already expended more than $1,000,000 in drilling operations and lease rentals in this area and can therefore be expected to drill at least one more exploratory well before concluding work.



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Kansas Developments

DISCOVERIES IN 4 COUNTIES ALL LOOK TO BE IMPORTANT

By
DAL DALRYMPLE

Oil field operations in Kansas were retarded by severe weather of the past week, but this did not prevent opening of some new producing areas, extensions of older pools and starting of additional wildcat tests. National Refining Co. was completing No. 1 McCullough, NE NE SW section 1-28-6, wildcat southeast of Leon in Butler County. It topped Wilcox sand at 3,169-75 feet, total depth, and 33-gravity oil rose 2,200 feet in the hole. Operators estimated the wildcat would produce 200 bbls. in 24 hours on the pump. They planned to stop at present depth to avoid possible water troubles, and were preparing to put the well on the pump without preliminary swabbing tests. The company has staked location for its No. 1 Sutter, SE cor. NW section 1-28-6, north offset to the new discovery, on a block of 1,040 acres.

Roth & Faurot and others apparently have opened a new Cowley County pool with their No. 1 Sherwood, NE NW SW section 11-31-4, on a block of about 600 acres, 7½ miles north of Winfield. It topped Bartlesville sand at 3,016 feet, had 20 feet of saturated sand and was bottomed at 3,037 feet in shale. The hole was reported full of oil and tanks were being set preparatory to a swabbing test. Nearest production is in the David pool, 2 miles north.

In Barton County, Yarnell, Carlson & Spencer were preparing to test their wildcat discovery, the No. 1 Bloomer, NE NE NW section 36-17-11w, 3 miles east of Claflin. It had 2,000 feet of oil in the hole from total depth of 3,281 feet in lime and was acidized. It ran high on structure and had no intervening formations between the Kansas City and Siliceous lime horizons.

F. A. Gillespie & Sons, Tulsa operators, were to retest their No. 1 Low, NE NE NW section 12-6-18w, wildcat in Rooks County and the farthest north strike in Kansas. It pumped 60 bbls. of oil in nine hours from Oswald lime at 3,161 feet, was acidized, and the acid ate out the casing seat and water broke in, drowning out the oil.

McPherson Drilling Co. and Derby Oil Co. No. 1 Scheuchzer, NE NE SW section 17-24-4w, wildcat southwest of the Burrton area in Reno County, flowed 689 bbls. of oil in 24 hours through tubing from chat at 3,391 feet. It was to be given potential test.

Ellsworth County

Empire Oil & Refining Co. No. 12 Rolfs, NW NE NE section 14-17-9w, in the Lorraine area of Ellsworth County, was completed as a water disposal well. LaMotte sand was topped at 3,740 feet, 3,855 feet, total depth.

New tests in Ellsworth County follow: Carter Oil Co. and others No. 5 Teubner, C N half N half NW section 26-17-9w, location; same operators' No. 3 Ogden, C SW section 26-17-9w, location.

Carter Oil Co. and others' No. 2 Ogden, C N half N half SW section 26-17-9w, in the South Lorraine pool, had Siliceous lime at 3,167-70 feet, total depth, and pumped 1,093 bbls. of oil in 18 hours.

Rice County

Three completions in Rice County included one wildcat failure and two oil producers in proven areas. Mid-Continent Petroleum Corp. No. 2 Risse, SW NE NE section 6-20-10w, in the Silica pool, had Siliceous lime at 3,288-93 feet, total depth 3,315 feet; was acidized with 2,000 gallons and on potential test produced 665 bbls. of oil.

Gulf Petroleum Corp. No. 2 Dick, NE NW SW section 15-20-9w, in the Keesling area, had Siliceous lime at 3,233-37 feet, total depth 3,252 feet; was shot with 40 quarts at 3,236-52 feet, pumped 645 bbls. of oil in 15 hours and made potential of 1,037 bbls. of oil.

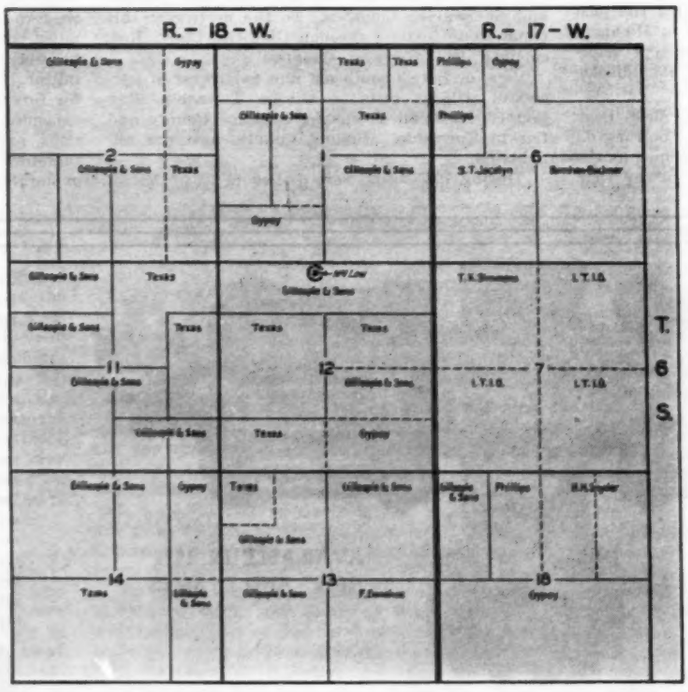
Tabor-Coleman and Atlantic Oil Producing Co. No. 1 Tharp, C NW NW section 33-21-6w, wildcat, was dry and abandoned at 4,097 feet, total depth. It had Viola lime at 3,952 feet; Simpson formation at 4,000 feet and Siliceous lime at 4,072 feet.

New work in Rice County: Empire Oil & Refining Co. No. 1 Janssen, NE NE NW section 3-18-8w, building rig; Continental Oil Co. and others' No. 1 Ainsworth, SW SW SE section 24-18-8w, location; Shell Petroleum Corp. and others No. 9 Ploog, C-16, C N half N half SE section 33-18-9w, building rig; Continental Oil Co. and others No. 1 Root, NW NE NE section 36-18-8w, moving in material; C. R. Davis and others No. 7 Dueser, W half NW SW section 31-19-10w, moving in material; Hutchinson Oil Co. No. 3 Wendell, SE NW NE section 32-19-10w, building rig; same operators' No. 4 Wendell, SE SW NE section 32-19-10w, moving in material.

Slick, Pryor & Lockhart and others No. 2 Volkland, NE SE NW section 5-18-10w, in the Bushton area of northwestern Rice County, was treated with acid and pumped 220 bbls. of oil in 18 hours. Siliceous lime was topped at 3,247 feet, total depth 3,271 feet.

In the Ploog area, Shell Petroleum Corp. and others No. 3 Haxton "A," C E half E half NW section 33-18-9w, had Siliceous lime at 3,240 feet, was drilled to 3,258 feet and acidized, after which it produced 100 bbls. of oil and 25 bbls. of water in 16 hours; it then was deepened to 3,265 feet and had 100 feet of oil and 500 feet of water in the hole.

Gulf Oil Corp. No. 4 Coffman, NE NW SW section 5-20-9w, in the Chase pool, pumped 87 bbls. of oil and 265 bbls. of water in 24 hours after acidizing. Siliceous lime was topped at 3,235 feet, total depth 3,295 feet, plugged back to 3,244 feet. Sinclair Prairie Oil Co. No. 4 Sharp, SW NE NE section 7-20-9w, topped Siliceous lime at 3,248 feet, total depth 3,272 feet, and swabbed 35 bbls. of oil in one hour. Mid-Continent Petroleum Corp. No. 6 Hartle, SW SE NW section 15-20-9w, swabbed 50 bbls. of oil per hour for four hours after topping Siliceous lime at 3,225 feet and drilling to 3,239 feet, total depth.



F. A. Gillespie & Sons of Tulsa have opened the farthest north pool in Kansas with their No. 1 Low, wildcat in northern Rooks County

(Mid-Continent Map Co., Wichita, Kans.)

Ellis County

The sole Ellis County completion of the week was the Wolf Creek Oil Co. and others No. 1 Schmidtberger, SE NE SE section 24-12-16w, in the Fairport district, which was dry and abandoned. It topped Oswald lime at 3,108 feet and had Conglomerate at 3,397-3,510 feet, total depth.

One new test was started in Ellis County. Winkler & Koch and others, SE SE SW section 21-11-17w, was a location.

Russell County

Phillips Petroleum Co. No. 1 Rexroot, SE SW SW section 30-14-14w, in Russell County, was completed at 3,168½ feet, total depth, in Siliceous lime topped at 3,162 feet. It pumped 258 bbls. of oil, was acidized and then established potential of 253 bbls. of oil.

R. C. Tarrant No. 1 Williamson, SE SE NW section 9-14-14w, was the only other Russell County completion. Tarkio lime was topped at 2,515 feet, total depth 2,550 feet; after acidizing it made a potential of 243 bbls. of oil. It is a wildcat and opens a new pool north of the Fink area and south of Russell.

New work starting in Russell County follows: Sinclair Prairie Oil Co. No. 4 Hefferman, NW NW NE section 26-15-13w, was moving in material; Skelly Oil Co. No. 1 Schwartzkopf, SE cor. section 26-15-15w, rigging up rotary; Gulf Oil Corp. No. 1 Hall, SW NW SE section 36-14-15w, cellar; Lario Oil & Gas Co., and Texas Co. No. 3 Boxberger, E half NW NW section 24-14-15w, cellar.

Phillips Petroleum Co. and Indian Territory Illuminating Oil Co. No. 1 Jellison, NE NE NW section 30-13-14w, southwest of Russell, produced 84 bbls. of oil in five hours after acidizing with 1,000 gallons. Siliceous lime was topped at 3,280 feet, total depth 3,288 feet.

In the Sullivan area, the Texas Co.

No. 3 Johnson, SE NE NE section 2-14-15w, had Gorham sand at 3,310-14 feet, total depth, and made potential of 394 bbls. of oil in 24 hours. It is the first Gorham sand well in the pool.

Central Petroleum Co. No. 1 Benso, SE SE SW section 9-14-15w, wildcat southeast of Gorham, had Oswald lime at 3,035 feet, total depth 3,096 feet, and pumped 215 bbls. of oil in 20 hours.

In the Ochs area, Barnsdall Oil Co. No. 1 Karst, NE SE NW section 27-15-14w, had Siliceous lime at 3,326-52 feet, total depth; was treated with 1,000 gallons of acid and swabbed 30 bbls. of oil and 12 bbls. of water in 12 hours; it then was acidized with 2,000 gallons and swabbed 100 bbls. of oil and 24 bbls. of water in 24 hours.

Sumner County

Sinclair Prairie Oil Co. No. 4 Kamis, C S half S half SW section 28-31-1w, in the Wellington area of Sumner County, made a 24-hour potential of 282 bbls. of oil after acidizing. Chat was topped at 3,645 feet, total depth 3,704 feet.

Stanley & Jarvis and others No. 1 Scroggin, NE SW NE section 14-32-2, in the Oxford pool, was deepened from old total depth of 2,090 feet. Simpson Dolomite was topped at 2,870 feet, total depth 2,956 feet. It pumped 87 bbls. of oil and 240 bbls. of water in 24 hours, and was completed.

New operations in Sumner County: Vickers Petroleum Co. No. 2 Markley, NW SW SE section 28-31-1w, location; Shell Petroleum Corp. No. 1 State, NE NW SW section 25-31-2, deepening from old total depth of 1,899 feet, drilling at 2,020 feet; Deal Oil & Gas Co. No. 1 fee, SW SE SE section 11-32-2, cellar.

Derby Oil Co. No. 2 Reitz, NE NW SW section 25-31-2, in the Churchill pool, an old well deepened, had Kansas City lime at 2,191 feet, total depth 2,277 feet, was acidized and pumped 45 bbls. of oil. Shell Petroleum Corp. No. 1 Shore "B," 307 feet from the north and 1,032 feet from the west line of SW quarter section 25-31-2, deepened from old total depth of 1,899 feet to 2,178 feet, swabbed 148 bbls. of oil in six hours. Same operators' No. 3 Emrich, SE SW NE section 14-32-2, deepened from 2,087 feet, topped Simpson Dolomite at 2,851 feet, total depth 2,947 feet, swabbed 3 bbls. oil per hour after shot.

Stevens County

Stevens County Oil & Gas Co. No. 2 Young, C NE section 14-34-39w, in the Hugoton gas field, was a location.

In the same area, Stevens County Oil & Gas Co. No. 1 Young, C SW section 11-34-39w, total depth 2,735 feet, produced 9,300,000 feet of gas in 24 hours.

Reno County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. had the only Reno County producer with their No. 2 Hilger, NW NE NW section 16-26-4w, in the Hilger area. Top of Chat was 3,630 feet; Viola lime, the producing horizon, was topped at 4,055 feet, total depth 4,057 feet. It flowed 40 bbls. of oil an hour and then established potential of 1,052 bbls. of oil in 24 hours.

Three new tests were started in Reno County. McPherson Drilling Co. and others No. 1 Miller, SE SE NE section 23-24-5w, was a cellar; same operators' No. 1 Schrock, SW SW NW section 27-24-5w, building rotary rig; Texas Co. No. 3 Collins, SW NW SE section 17-24-4w, was a location.

Harvey County

Selby Oil & Gas Co. No. 2 Sperling, NE SE SE section 14-22-2w, in the Sperling pool, Harvey County, was completed as a gas well, producing from Chat found at 2,928-55 feet, total depth. Gas gauged 7,684,000 feet.

No new work was started in Harvey County.

Shell Petroleum Corp. No. 1 Dierkson, SE SE SW section 5-22-3w, in the Hollow-Nikkel area, had Hunton lime at 3,487½ feet, total depth 3,522 feet, was shot with 10 quarts, swabbed 35 bbls. of oil in eight hours and then swabbed at the rate of 2 bbls. of oil per hour after a head.

Sedgwick County

Dickey Oil Co. No. 4 Yaw, NE SW NE section 20-28-1, in the Robbins pool, was the only Sedgwick County completion. It topped Chat at 3,073 feet, total depth 3,114 feet, and after acidizing with 2,000 gallons made a 24-hour potential production of 119 bbls. of oil.

Sedgwick County had no new tests.

Trego County

Alma Petroleum Co. and McNeely No. 2 Rhoades Estate, C NW NE section 14-11-23w, in the Wakeeney pool, pumped 40 bbls. of oil in 24 hours; Kansas City lime was topped at 3,450 feet, total depth 3,525 feet.

Rush County

Schermerhorn Oil Co. and others No. 1 Eitel "B," C SE section 14-18-16w, in the Otis gas field of Rush County, topped sand at 3,451 feet, total depth 3,500 feet, and produced 8,000,000 feet of gas.

Schermerhorn Oil Co. and others No. 1 Maneth-Brackley, C NE section 22-18-16w, in sand at 3,546 feet, total depth 3,566 feet, flowed 465 bbls. of oil in 12½ hours and produced 5,500,000 feet of gas. It is the largest oil well in the Otis area, only one small oil producer formerly having been completed.

Barton County

No wells were completed in Barton County but the followig new tests were started: Continental Oil Co. No. 3 Risse, E half NE SE section 36-19-11w, cellar; Continental Oil Co. No. 4 Risse, SW SE SE section 36-19-11w, location; Continental Oil Co. No. 5 Risse, SE SW SE section 36-19-11w, location; Texas Co. No. 1 Moran, SE SE SW section 25-17-11w, location.

Woodson County

The only completion in Woodson County was Sheedy and others' No. 7 Akins, C N half NW SE section 19-25-14, in the Quincy area. It had sand at 1,423-54 feet, total depth 1,525 feet; it was plugged back to 1,470 feet, shot with 200 quarts at 1,420-50 feet and pumped 250 bbls. of oil in 24 hours.

C. L. Sheedy was rigging up machine at the No. 1 Baker, SE SE NW section 2-26-14, the only new Woodson County test.

McPherson County

One well was completed in McPherson County, Roth & Faurot No. 5 Swanson, NW SE NE section 13-19-3w, in the Chindberg pool. Kansas

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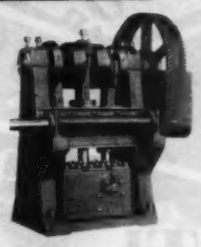

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City lime was topped at 2,338 feet; pay was found at 2,346-56 feet, total depth 2,366 feet. After acidizing with 2,000 gallons it made a potential production of 118 bbls. of oil.

Elk County

Clay Petroleum Co. No. 1 Shambaugh, SW SW NW section 21-28-9, in Elk County, swabbed 184 bbls. of oil in 15 hours from Siliceous lime at 2,838-49 feet, total depth, and was completed.

Pratt County

Skelly Oil Co. and others have another oil producer on the Pratt County side of the Cunningham pool. It is No. 2 Maxedon, NW NW SE section 25-27-11w. Kansas City lime was found at 3,412-17 feet, total depth 3,453 feet. After acidizing with 3,000 gallons, it produced 285 bbls. of oil, cutting 26 per cent water, on potential test and was completed.

Stafford County

In the Richardson pool of Stafford County, Stanolind Oil & Gas Co. and others No. 7 Allen, SE SW SW section 31-22-11w, after acidizing with 3,000 gallons, swabbing 37 bbls. of oil in one hour, and establishing potential of 1,034 bbls. of oil in 24 hours. Siliceous lime was found at 3,544-61 feet, total depth.

Greenwood County

Lucille Oil Co. No. 1 Christy, SE NW SE section 12-26-9e, in the Reece pool, Greenwood County, old total depth 2,159 feet, was drilling at 2,186 feet, to test deeper horizons.

Cowley County

Location has been staked for the A. M. Scroggin No. 1 Brady Estate, NE NE SE section 30-31-3, east of the Churchill pool, Cowley County, a wildcat.

Butler County

New work in Butler County includes the following: Polhamus and others No. 3 Semisch, NW NE NE section 5-28-7, drilling below 1,425 feet; Jones and others No. 1 Sandberg, NW NW SE section 11-28-6, location; Pryor & Lockhart and others No. 2 Gunther, NW SE NW section 29-26-7, drilling below 1,645 feet; Vickers Petroleum Co. No. 1-A McCraner "E," W half SW SE section 35-24-3, spudding.

Estimated Production

Estimated daily average production of Kansas for the week ending February 8 and for the preceding week is as follows:

	Barrels	
	Feb. 8	Feb. 1
Oxford City	6,750	7,261
Burrton	13,100	12,350
Ritz-Canton	7,100	7,146
Hollow-Nikkel	5,025	4,878
Voshell	3,425	3,343
Ellsworth County:		
Lorraine-So. Lorraine	8,289	8,277
Other pools	962	1,943
Rice-Barton Counties:		
Chase	8,180	9,892
Raymond	2,501	1,576
Stockel-Isern (Silica)	2,120	5,736
Keesling	1,877	1,617
Miscellaneous Rice	2,750	2,817
Miscellaneous Barton	1,138	1,105
Russell County:		
Fairport	2,455	2,715
Gorham	3,092	2,990
Russell	1,970	2,202
Other pools	4,152	5,720
Sedgwick County:		
Valley Center	1,344	1,372
Greenwich	1,390	1,428
Robbins	1,545	1,667
Eastborough	911	961
Other pools	544	641
Ellis County	469	594
Kingman County	615	634
Stafford County	1,305	1,134
Greenwood County	10,750	10,750
Butler County	17,900	18,000
Other fields	19,012	18,506
Total Kansas	131,575	137,175

Shreveport Banquet

SHREVEPORT, La., Feb. 10. — A special committee having charge of an oil men's and business men's banquet was set up by a recent meeting of the executive committee of the Louisiana-Arkansas Division of the Mid-Continent Oil and Gas Association. A. H. Tarver, chairman of the banquet committee, which includes Pleas O. Hardwick, L. M. Moffitt, and J. A. Welch, announces the meeting will be held in the Crystal Ballroom of the Washington-Youree Hotel, Friday, February 28. The principal speaker will be George B. Logan, attorney of St. Louis, Mo., who has made an exhaustive study of social security legislation, and will speak on that subject.

Jersey Standard Club

NEW YORK, Feb. 10.—With more than 1,000 in attendance, the Jersey Standard Club held its annual dinner dance in the grand ballroom of the Waldorf-Astoria Hotel.

Nelson A. Rockefeller was guest of honor, and informal addresses were made by Walter C. Teagle, president of Standard Oil Co. (New Jersey), and T. C. McCobb, comptroller and a director of the company. E. B. Lyman, president of the club, served as toastmaster. The entertainment was arranged by a committee headed by Fred Deane of the fuel oil sales department of the Jersey company, and vice president of the employe organization.

Louisiana Refining Tax

BATON ROUGE, La., Feb. 10.—Gov. James A. Noe has followed the example of his predecessor, Governor Allen, by continuing suspension of collection of 4 cents of the 5 cents a barrel oil refining tax levied 14 months ago, until 20 days after the 60-day regular session of the legislature which opens May 11, adjourns. He said the extension would "place the subject in shape for further consideration by the legislature."

Early in 1935 the legislature authorized the governor to suspend collection of 4 cents of the tax, levied at the third 1934 extra session controlled by the late Senator Huey P. Long.

Tulsa Oil Program

Spot oil news supplied by The Oil and Gas Journal is being heard by oil men throughout the Mid-Continent area over KVOO on Sunday afternoons at 4:30 in a new series of "We Bank on Oil," programs sponsored by the First National Bank & Trust Co. of Tulsa. Besides oil news, the program includes dramatic events and human interest stories of men and companies prominent in the oil industry. The first program recounted the founding and progress of The Oil and Gas Journal.

Southwest Texas Progress

SAN ANTONIO, Tex., Feb. 10.—Approximately 5 miles of the new Duval pipe line from Loma Novia to Corpus Christi has been welded, and 40 miles of pipe for the 72-mile line has been delivered in San Diego. Operation of the Loma Novia-San Diego section of the line is expected to commence by February 20. Oil will be shipped from the latter point by rail pending the completion of the line to the deep water terminal at Corpus Christi.

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By
DAL DALRYMPLE

GUSHER FROM WILCOX SAND FOUND IN OLD BILLINGS POOL

Wilcox sand gusher production in the old Billings pool, northwestern Noble County, has been proven by the Phillips Petroleum Co. and Shell Petroleum Corp. No. 1 McCaughtry, NW NE NE section 21-23-2w, the first important strike in Oklahoma in 1936. The location is on the west flank of the Billings structure and the discovery is expected to open up a big play on that side of the area. Heretofore, activity has been in the center and on the eastern side of the Billings anticline, with little attention given the west side until late in 1935, when both the Phillips and Shell companies explored the area, leased blocks and united their holdings. Tide Water Oil Co. has a block to the northwest of the old pool and has started work at its No. 1 O'Neill (Conway), SE SW NE section 16-23-2w.

No. 1 McCaughtry topped Wilcox sand at 4,341 feet, drilled to 4,256 feet, where the crew halted, pulled the tools and ran the bailer. The well then flowed a 35-bbl. head in 15 minutes, and made two more flows of about 30 bbls. each before it was shut in. It was deepened to 4,258 feet, but the cable parted and the tools dropped in the hole. Late Saturday the pressure blew the tools out of the hole and oil flowed over the top of the derrick for about 45 minutes. No gauge was taken, but estimates of production ranged from 200 to 300 bbls. an hour, with gas measuring about 20,000,000 feet daily. The well was shut in for connections, tanks and separator.

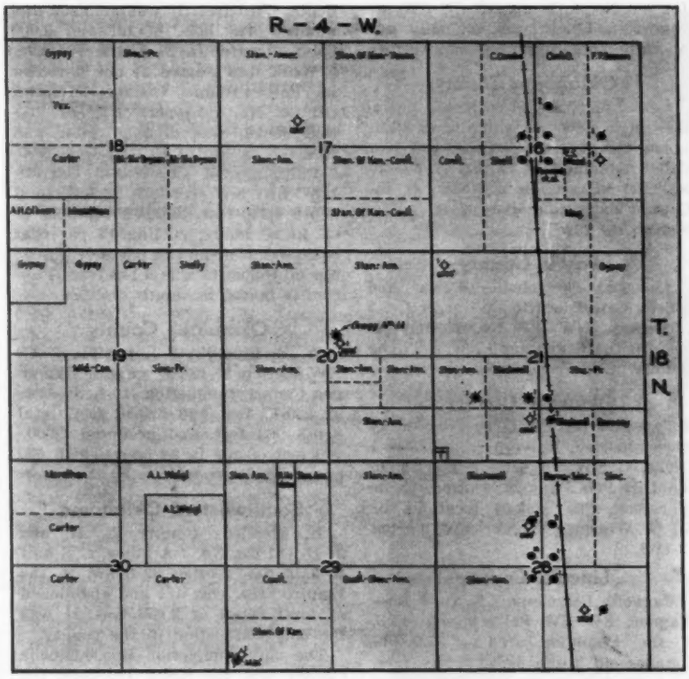
The Billings pool was opened in 1915, production being found in shallow horizons. In the summer of 1935, Mid-Co Oil Corp. and associates found Arbuckle lime production in their No. 1-A Yost, on the east side of the pool in NE NW NE section 22-23-2w, which missed Wilcox sand and had the lime horizon at 4,227-57 feet.

British-American Oil Producing Co. No. 1 Kersch, NE SW SW section 23-12-3w, is the newest producer in the area northeast of the governor's mansion at Oklahoma City. It had Wilcox sand at 6,315-6,450 feet, total depth, and produced 2,675 bbls. of oil on gas lift in six hours; production in the last four hours was 1,848 bbls., giving it a potential of 11,091 bbls.

Many operations throughout the state were delayed and in some instances work was halted entirely during the past week because of unfavorable weather.

Creek County

Creek County completions totaled five. Moasco Oil Co. No. 1-A Mock, NW NW SE section 16-18-7, topped Layton sand at 1,594 feet and was dry and abandoned at 1,636 feet, total depth. Big Four Petroleum Co. No. 1 Anthis, NW cor. section 12-18-8, flowed 22 bbls. of oil in 24 hours after a shot with 60 quarts; Red Fork sand was had at 2,595-2,605 feet, total depth. Same operator's No. 2 Swift, CNL NW SW section 35-19-8, topped Red Fork sand at 2,575 feet, 2,605 feet total depth, and flowed 50 bbls. of oil in 24 hours. Johnson Oil Refining Co. No. 1 Flinchin, NW SE SW section 11-19-9, deepened from 2,102 feet, topped Bartlesville sand at 2,145 feet, total depth 2,173 feet, and pumped 10 bbls. of oil in 24 hours after a shot with 20 quarts. Bailey and others No. 1 McCracken, NW NE NW section 19-19-9, had Bartlesville sand at 2,440 feet, total depth 2,534 feet, and was abandoned.



No. 1-A Gragg, which proved production west of Lovell, in Logan County, Oklahoma, produced 39,000,000 feet of gas, with oil showing
(Mid-Continent Map Co., Tulsa)

New work in Creek County included the following: Tide Water Oil Co. No. 13 Turnbow, SE SW SW section 12-17-7, rigging up machine; Big Four Petroleum Co. No. 3 Briggs, SW cor. section 35-19-8, location; W. C. McBride, Inc., No. 2 Starr, SE SE NE section 17-18-7, rigging up standard tools to deepen from old total depth of 2,520 feet; Abraham No. 1 Dickson, CWL NW NW section 19-17-10, machine.

Seminole County

Carter Oil Co. and others No. 2 Nichols, SW SW NW section 2-10-6, in the Keokuk pool, northern Seminole County, flowed 150 bbls. of oil in four hours, established potential of 553 bbls. of oil and was completed. Production was from Misener sand topped at 4,132 feet, total depth 4,142 feet. Same operator's No. 1 Badger, E half SW SW section 11-10-6, topped Misener sand at 4,179 feet; Hunton lime, 4,192 feet; total depth 4,199 feet; was acidized, flowed 408 bbls. of oil in 24 hours through choke and was completed. Magnolia Petroleum Co. No. 4 Browning, E half NW NW section 14-10-6, was completed after topping Misener sand at 4,182 feet, drilling to 4,193 feet, flowing 140 bbls. of oil in four hours through casing, 141 bbls. in eight and one-half hours while running tubing, and 53 bbls. in three hours through tubing.

Fleetborn Oil Co. No. 1 Chapman, NE NW NW section 34-8-8, topped Wilcox sand at 4,255 feet, total depth 4,260 feet, was shot and swabbed 205 bbls. of oil in 24 hours, completed. Vandeventer No. 1-B Bendon, NE NE SW section 3-8-8, an old wildcat deepened from 3,254 feet, had Cromwell sand at 3,364 feet, total depth 3,374 feet, and on completion gauge produced 15,887,000 feet of gas.

Malarnee and others No. 1 Bruner, NE NE SW section 33-7-6, in the Little River area, topped Booch sand at 2,923 feet, total depth 2,973 feet, plugged back to 2,968 feet, was shot with 25 quarts, swabbed 160 bbls. of oil in 24 hours, completed. Reynolds Drilling Co. No. 1 Harjo, NW SE SE section 13-6-7, in the Sasakwa district, was shot with 40 quarts, swabbed 46 bbls. of oil, cutting 2 per cent water, in 24 hours, completed; Gilcrease sand was topped at 2,787 feet, total depth 2,838 feet, plugged back to 2,829 feet.

New work in Seminole County includes the following: J. D. Campbell No. 2 Knappenberger, NE NW NE section 17-9-7, rig on ground; Amerada Petroleum Corp. and others No. 1 Conner, NE NE SW section 3-10-5, wildcat, digging cellar; Carter Oil Co. and others No. 1 Bruner, N half NW SW section 2-10-6, location; same operator's No. 2 Criswell, C E half NW SE section 2-10-6, location; same operator's No. 4 Pipkin, C W half SE SW section 2-10-6, rigging up rotary; Magnolia Petroleum Co. No. 5 Browning, C W half SW NW section 14-10-6, location; Carter Oil Co. No. 1 McDonald, C W half NE NW section 23-10-6, old well drilling deeper, building rig; J. R. Campbell No. 1 Park, SE SW SE section 8-9-7, drilling at 2,433 feet; Commercial Drilling Co. and J. N. O'Donnell No. 1-A Grisso, C NW SE section 23-9-6, location; Exchange Drilling Co. No. 1-A D. Harjo, C SE SW section 25-9-6, building rig; E. W. Jones No. 1 Shiffut, NW NW NE section 34-8-8, cellar and pits; Southern Oil Co. and Eason Oil Co. No. 1 Harjo, NW SW NE section 11-6-6, old well drilling deeper, building rig; and Blackwell Oil & Gas Co. No. 3 Harjo, NW SW SE section 12-5-7, location.

Noble County

Twin State Oil Co. completed its No. 4 DeVore, NE NW NW section 27-22-2w, in the Polo pool of western Noble County. Sand was topped at 4,883 feet; first flow of oil at 4,892 feet, increasing at 4,914-19 feet. It was drilled to total depth of 4,940 feet, water intruded, and it was plugged back to 4,917 feet, flowing 632 bbls. of oil in 24 hours after a shot.

The only new work starting in Noble County was at an old dry hole being deepened, the Stanolind Oil & Gas Co. No. 1 Shoop, NW NW SE section 27-22-2w, in the Polo area, which was drilling at 4,965 feet.

Garfield County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Brunken, SW SW NE section 32-23-4w, northwest of the Garber area, had dug cellar and pits. Location is on a seismograph high discovered by the operating companies.

Work has started at two wildcat tests in Garfield County. Herndon Drilling Co. and others No. 1 Branson, SW SW SE section 23-24-3w, in the northeastern part of the county

and northwest of the Billings area in Noble County, had dug cellar and pits. This is a community test in which Continental Oil Co., Southland Oil Co., Sinclair Prairie Oil Co., Skelly Oil Co. and Herndon Drilling Co. are interested.

Estimated Production

Estimated daily average production of Oklahoma for the week ending February 8 and for the preceding week is as follows:

	Barrels	
	Feb. 8	Feb. 1
Allen	6,800	6,350
Asher-West Asher	900	875
Burbank	7,800	7,800
South Burbank	11,750	11,000
Balance Osage	22,900	22,900
Blackwell	4,700	4,700
Bristow-Slick	8,725	8,750
Chandler	3,900	4,000
Crescent	4,500	4,500
Cromwell	3,900	3,900
Cushing-Shamrock	12,100	12,100
Duncan district	4,000	4,200
Edmond	6,725	6,325
Fish	9,550	10,825
Fitts	32,100	27,825
Gray	1,650	1,700
Graham	3,850	3,850
Healdton	8,950	8,950
Hewitt	4,425	4,425
Holdenville	1,150	1,175
Keokuk	2,750	4,025
Konawa	1,875	1,900
Lucien	10,300	10,150
Marshall-Lovell	1,000	1,000
Oklahoma City	139,150	137,725
Papoose	1,150	1,150
Polo	3,500	3,400
Sasakwa and townsite	3,725	3,475
Sholem-Alechem	3,500	3,625
Seminole field:		
Bowlegs	7,850	8,825
Carr City	3,450	5,300
Earlsboro	7,525	7,525
South Earlsboro	900	800
East Earlsboro	9,425	10,000
Little River	14,350	15,475
East Little River	1,100	1,100
Maud	975	1,000
Mission	2,400	2,650
Seminole	11,225	11,050
East Seminole	1,575	1,500
Searight	4,250	3,575
Total Seminole	65,025	68,800
St. Louis-Pearson	21,125	21,675
Tatums	2,600	2,750
Tonkawa-Garber-Thomas	5,450	5,400
Wewoka	2,900	2,900
Yale-Jennings	4,050	4,050
Other pools	56,500	57,100
Total Oklahoma	487,575	497,275

Logan County

On the Logan County side of the Lucien pool, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Sharp, S half SW NW section 34-20-2w, was completed. It topped first Wilcox sand at 5,046 feet, had a hole full of oil at 5,047-53 feet and was bottomed at 5,074 feet in green shale. After shooting, it flowed 65 bbls. of oil in 24 hours.

Stanolind Oil & Gas Co., Amerada Petroleum Corp. and Eason Oil & Refining Co. No. 1-A Gragg (Bird), SW SW NE section 20-18-4w, wildcat in the Lovell area of Logan County, was killing an estimated 39,000,000 feet of gas to fish for tools lost when gas blew out at total depth of 5,993 feet. Dolomite was topped at 5,960 feet.

Osage County

In the South Burbank pool of Osage County, Carter Oil Co. and others No. 7 Williams, NW SW NW section 35-26-6, topped Bartlesville sand at 2,850 feet, total depth 2,919 feet, flowed 1,166 bbls. of oil in 24 hours, completed; gas gauged 1,250,000 feet. Kewanee Oil & Gas Co. No. 5 Renald, SE NE SW section 26-26-6, had Bartlesville sand at 2,843 feet, total depth 2,915 feet; plugged back to 2,915 feet, base of sand, it was shot with 110 quarts and flowed 1,815 bbls. of oil in 24 hours, gas gauging 1,500,000 feet, completed.

In the Naval Reserve area, Champlin Refining Co. No. 4 Claremore, NE cor. section 17-24-7, had Bartlesville sand at 2,628-56 feet, total depth, was shot with 30 quarts and swabbed 33 bbls. of oil in 24 hours, completed. Lewis Production Co. and Texas Co. No. 1 Kinney, SE cor. section 8-24-7, was abandoned after topping Bartlesville zone at 2,667 feet and showing water at 2,710 feet, total depth.

Texas Co. No. 1 Osage, NE NE SE section 25-25-7, in the Atlantic area, swabbed 18 bbls. of oil in 24 hours and was completed. It topped chat at 2,437 feet, Burgess sand at 2,453-66 feet, total depth 2,469 feet.

Midco Petroleum Corp. No. 4 Osage, NW SW SW section 17-22-10, was completed as a producer in Burgess sand at 1,925-45 feet, total depth, flowing 40 bbls. of oil in 24 hours through tubing, after acidizing.

Sinclair Prairie Oil Co. No. 31 Osage, SE SW NW section 19-23-12, was deepened from 1,759 feet to 1,802 feet and recompleted, pumping 4 bbls. of oil and 2 bbls. of water in 24 hours.

J. R. Higgins No. 17 Osage, NE SW SE section 25-23-8, had Bartlesville sand at 2,110-70 feet, total depth 2,198 feet, plugged back to 2,187 feet, and was completed as a gasser, producing 150,000 feet of gas.

Ray Branstetter staked location for his No. 4 Osage, SE SE SW section 23-22-11. It was the only new operation starting in Osage County.

Oklahoma County

Cellar and pits were being dug at the single new test starting in Oklahoma County, the British-American Oil Producing Co. No. 1 Roanoke, NE NE SE section 22-12-3w, in the Capitol extension area of the Oklahoma City field.

Payne County

Amerada Petroleum Corp. and others staked location for their No. 2 Gassoway, NW NE NE section 33-19-3, in the Stillwater area of Payne County.

Okfuskee County

Two new tests in Okfuskee County were reported. Raivern Oil Co. No. 1 Hicks, C NW SE section 11-11-8, in the Dill Pool, was a location. Same operators also staked location for No. 1 Winship, C NW SW section 12-11-8.

Lincoln County

Magnolia Petroleum Co. No. 1 Ross Wagner, SW SW SE section 2-14-3, in the Chandler area of Lincoln County, old total depth 4,988 feet, was plugged back to 4,240 feet; 9-inch casing was ripped at 4,185-4,240 feet, it was shot with 40 quarts at 4,180-4,211 feet and flowed 220 bbls. of oil in 24 hours. Skinner sand was found at 4,210-20 feet. It was the only new work reported in Lincoln County.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 Crawford, NE NE SE section 35-15-2, wildcat north of Wellston in western Lincoln County, flowed 131 bbls. in 10 hours, 20 per cent oil and 80 per cent salt water and mud, and was shut in. Gas gauged 18,000,000 feet. First Wilcox sand was topped at 5,110 feet, second Wilcox sand at 5,218 feet, total depth 5,229 feet. Texas Co. No. 1 Andrew, NW NE SE section 28-14-5, wildcat, total depth 4,188 feet, plugged back to 3,925 feet, and produced 2,000,000 feet of gas in 24 hours and was shut in; top of Prue sand was 3,580 feet.

Hughes County

Two Senora sand producers were completed in the Olympic pool of Hughes County. Manahan Oil Co. and others No. 5 Oliphant "B," SW NW SW section 12-9-8, topped sand at 1,755 feet, total depth 1,807 feet, was shot with 60 quarts and flowed 270 bbls. of oil in eight hours. The other completion was the Rogers Brothers No. 4 Oliphant, NW SW SW section 1-9-8, which flowed 60 bbls. of oil in 24 hours; it topped sand at 1,702 feet, total depth 1,723 feet, and was shot with 20 quarts.

New work in Hughes County follows: Phillips Petroleum Co. No. 1 Eberle, NE NE SW section 12-5-9, wildcat southeast of Atwood and southwest of Calvin, location, based on seismograph and surface geology; Sinclair Prairie Oil Co. No. 4 Oliphant, SE SW SE section 1-9-8, moving in rig; Manahan Oil Co. and others No. 1 Oliphant-D, NW SE SW section 12-9-8, spudded; J. Garfield Buell No. 4 Buck, C SW section 21-9-10, rigging up rotary.

Pottawatomie County

The only new completion in Pottawatomie County was the Shell Petroleum Corp. No. 1 Mitchell, NE NW NE section 3-6-4, in the St. Louis area. Simpson Dense was topped at 4,208 feet, Dolomite 4,266 feet, total depth 4,310 feet. It was acidized and pumped 488 bbls. of oil and 2,000 bbls. of water in 24 hours.

Work was started at one new test in Pottawatomie County. Mohawk Oil Co. No. 1 Lippert, NE cor. section 35-6-4, was digging cellar and pits.

Phillaine Oil Co. No. 3 Garrett, NW SE NW section 28-7-4, total depth 4,146 feet, pumped 749 bbls. of oil in 20 hours, cutting 12 per cent basic sediment and 12 per cent water; top of Dolomite was 4,112 feet; location is in the St. Louis district.

Okmulgee County

W. B. Pine No. 2 Randolph, C SE NW section 28-12-14, was an Okmulgee County completion. It had sands at 560-77 feet and 623-40 feet, total depth 663 feet, and produced 2,000,000 feet of gas in 24 hours, with 650 pounds rock pressure.

Southwestern Oklahoma

In Stephens County, L. H. and J. D. Oil Co. No. 1-A Snow, C S half S half SW section 22-1s-8w, in the Empire area, was dry and abandoned at total depth of 2,250 feet. It was the only completion in the county.

The only completion in Comanche County was the Black Diamond Oil Co. No. 1 Frazee, NE SE SE section 29-2-10w, in the Lawton area. It had a showing of oil in Granite Wash at 822-24 feet, but was abandoned at 930 feet, total depth.

The third failure for southwestern Oklahoma during the week was the Gulf Petroleum Corp. No. 2 Eley, SE cor. section 10-1-20w, in the Altus area of Jackson County. It had showings of oil in Granite Wash at 1,314-20 feet and 1,472-80 feet, total depth 1,758 feet in broken lime, plugged back to 1,515 feet, was shot with 20 quarts, bailed 3 gallons of fluid per hour and was dry and abandoned.

New tests in southwestern Oklahoma included the following: In Stephens County, Carter & Ring No. 6 Arn, NE NW NW NE section 26-1s-5w, moving in machine to deepen; Magnolia Petroleum Co. No. 3 Blalock, SW NW NW NW section 14-2s-5w, drilling with machine at 400 feet; in Comanche County, T. H. McCasland and others No. 1-A Smith, SW cor. section 12-2-10w, wildcat north of the Hanbury area, moving in tools; Guy Anderson No. 2 Price, NW NE NE section 30-2-9w, location; English Drilling Co. No. 2 Allen, SW SE NE section 28-2-10w, machine on location; in Grady County, Magnolia Petroleum Co. No. 1 Duke, NW NE SW section 35-5-8w, moving in machine to deepen; in Kiowa County, W. C. Adams and others No. 2-A Stone, SE SE NE section 34-7-17w, drilling at 310 feet; in Cotton County, Grace, Woods & Schultz No. 1 McDaniels, C S half S half SW section 23-2s-11w, had sand at 1,873-78 feet, total depth, and was testing.

W. C. Adams and others No. 3 Stone, formerly carried as Rajah Oil Co., C SE NE section 34-7-17w, wildcat west of the Gotebo area in Kiowa County, produced an estimated 25 bbls. of oil in 24 hours, but no official gauge had been taken. Production was from Viola lime topped at 880 feet, total depth 1,547 feet, plugged back to 960 feet. Burns & Moore No. 1 Webster, NE cor. section 2-6-17w, wildcat, had sand at 450-53 feet, total depth 458 feet, production was estimated at 8 bbls. of oil, and it was being rigged up to pump.

Carter County

Two producers were completed in northern Carter County. Maxine Oil Co. No. 1 J. J. Eaves, SW SW NE section 5-2s-2w, encountered oil sand at 1,432-49 feet, total depth, pumped 77 bbls. of oil in the first 24 hours and 38 bbls. in the second 24 hours. Coline Oil Co. No. 12 Higgins, NE NE SW section 6-2s-2w, had sand series at 1,991-2,008 feet and 2,052-70 feet, total depth 2,088 feet, pumped 80 bbls. of oil in 24 hours and was completed.

Work had started at two tests in Carter County. Shell Petroleum Corp. No. 3 Higgins "A," NW NW SE section 6-2s-2w, was a rig; L. Sikes, Inc., No. 3 Eaves, NE NW NW section 5-2s-2w, rig.

Shell Petroleum Corp. No. 59 Wirt Franklin, NE NW NE section 8-4s-3w, in the Healdton area of western Carter County, had sand at 978-87 feet, 99-1,000 feet, drilled to total depth of 1,109 feet, plugged back to 1,000 feet, produced 20 bbls. of oil, and was rigging up to pump.

Marshall County

Levelle Coal Co. No. 2 Brent, NW NE SE section 1-8s-5e, in the Isom Springs area of southern Marshall County, had sand at 532-47 feet, total depth, pumped 25 bbls. of oil in 24 hours and was completed. Another Isom Springs completion was the G. M. Felts No. 2 Felts, NE SW NW section 6-8s-6, which had sand at 508-16 feet, total depth, and pumped 35 bbls. of oil in 24 hours.

One new test was reported in Marshall County. G. M. Felts No. 3 fee, NW SW NW section 6-8s-6, was a machine.

Pontotoc County

In the busy Fitts field of Pontotoc County, E. H. Moore and others completed their No. 7 Patrick, NE SW NE section 31-2-7, which established potential of 428.64 bbls. of oil, cutting 3½ per cent water and basic sediment, after acidizing with 4,000 gallons; Bromide was topped at 4,160 feet, McLish at 4,297 feet, sandy Dolomite at 4,510 feet, total depth 4,515 feet; it was plugged back to 4,400 feet and acidized.

Stahl Petroleum Co. No. 1 Dennis, SW NE NW section 28-2-7, topped Bromide at 4,040 feet; McLish, 4,245 feet; total depth 4,299 feet; and

flowed 219 bbls. of oil in the first hour through casing and tubing, and then flowed 302 bbls. in four hours through tubing, establishing potential of 2,660.94 bbls., completed. Fleetborn & Simpson No. 2 Woolery, NE NW SE section 28-2-7, was completed at a total depth of 4,275 feet, after flowing 379 bbls. of oil in 30 minutes through casing, 1,058 bbls. in 6 hours through tubing and establishing potential of 4,619 bbls.; Bromide was topped at 3,880 feet; McLish at 4,082 feet, and Dense at 4,272 feet. Bishop Oil Co. No. 2 Simpson, SE NW NW section 28-2-7, topped Bromide at 4,030 feet; McLish, 4,245 feet; sandy Dolomite, 4,282 feet; total depth 4,299 feet; flowed 524 bbls. of oil in five hours through casing, 474 bbls. in eight hours through tubing, 377 bbls. in two hours through casing and 559 bbls. in six hours through tubing; established potential of 2,385 bbls. of oil and was completed.

Carter Oil Co. No. 4 Richards, NW NE SE section 30-2-7, old well drilled deeper, had sandy Dolomite at 4,315-40 feet and 4,375-80 feet, total depth, and established new potential of 2,578 bbls. of oil; before deepening it made potential of 2,244 bbls. Magnolia Petroleum Co. No. 1 Norris, old well plugged back from 4,424 feet to 4,411 feet, pumped 13 bbls. of oil in three hours and was recompleted.

The only other Pontotoc completion was the Radial Oil Co. No. 3-A Simpson, NW SW NE section 20-4-8, in the Steedman area, which had a hole full of water and was dry and abandoned at 575 feet, total depth.

New work in Pontotoc County was as follows: Clark & Cowden and W. A. Delaney No. 3 Brown, C N half SW NE section 12-4-7, location: Stanolind Oil & Gas Co. No. 5 Norris "E," NW SW SE section 25-2-6, old well cleaning out to plug back; Indian State Oil Co. No. 1 Byrd, NE NE SE section 35-2-6, location; E. H. Moore and others No. 5 Akers, NE SE NE section 36-2-6, old well, moving in material to deepen; Patsy Oil Co. No. 1 Magnuson, SW SE SE section 23-2-7, old well deepening, drilling at 4,000 feet; J. E. Crosbie, Inc., No. 3 Burris, SW SE NW section 27-2-7, rig corners; Magnolia Petroleum Co. No. 4 Burris "A," SE SW NW section 27-2-7, cellar and pits; same operators No. 3 Metropolitan Life Insurance Co., NE NW SW section 27-2-7, cellar; Samedan Oil Co. No. 2 Halkum, NE SW NE section 27-2-7, cellar and pits; J. E. Crosbie, Inc., No. 1 Smith, SW NE NE section 28-2-7, cellar; Fleetborn Oil Corp. No. 5 Wooley, NE NE SE section 28-2-7, building rig; E. H. Moore and others No. 8 Woodruff, SE NW SE section 29-2-7, old well deepened from 4,156 feet, had McLish at 4,170 feet, sandy Dolomite at 4,280-4,325 feet, and was bottomed at 4,391 feet; and Carter Oil Co. No. 5 Smith, SE NE NE section 31-2-7, rigging up rotary.

H. L. Blackstock and others No. 1 Reese, C N half SE NE NE section 35-2-6, topped Bromide at 4,350 feet, had first sand at 4,445-65 feet, total depth 4,480 feet, and flowed 390 bbls. of oil in the first 18 hours through tubing and 186 bbls. in the next eight hours through tubing. Mid-Continent Petroleum Corp. No. 1 McKoy, SW cor. section 20-2-7, was acidized with 5,000 gallons and 200-bbl. load and flowed 125 bbls. of oil net in three hours through tubing; Bromide was topped at 4,285 feet, total depth 4,389 feet, plugged back to 4,335 feet. H. L. Blackstock No. 1 Daniels, SE SE SW section 21-2-7, plugged back to 3,906 feet from total depth of 4,478 feet, where water was encountered, and flowed 40 bbls. of oil in 15 minutes through tubing.

Magnolia Petroleum Co. No. 1 Metropolitan Life Insurance Co., SW NW NE section 27-2-7, topped Bromide at 4,100 feet, sand at 4,195 feet, total depth 4,265 feet, flowed 239 bbls. in two hours through casing and 505 bbls. in 10½ hours through tubing, and was to be acidized. Simpson & Feld No. 1 Holkum, SW SW NE section 27-2-7, total depth 3,982 feet, was acidized and flowed 579 bbls. of oil in two hours through casing, and was drilling deeper. Skelly Oil Co. No. 5 Park College, SE SW NE section 28-2-7, topped McLish at 4,102 feet, total depth 4,288 feet, and flowed 918 bbls. in four hours through tubing.

Sinclair Prairie Oil Co. No. 8 Ralls, NW SE SW section 28-5-8, in the Allen area, had sand at 788-814 feet, total depth 818 feet, and swabbed 25 bbls. of oil in 24 hours after a shot.

Southwest Texas Fields

(Continued from Page 49)

Webb County continued unsuccessfully as the last of three recent tests found salt water in sand at 5,024-35 feet. The test, Holland Reavis No. 1 Webster located in the Carolina-Texas field will probably be drilled to 6,000 feet. O. W. Killam is rigging up on No. 46 Bruni in the area of his No. 44 Bruni. The latter well opened shallow gas production last week in sand at 1,801-11 feet.

Operations in Zavalla County seem about to begin with Leona Oil Co. and Witherspoon Oil Co. No. 1 George West to be spudded in shortly, and W. L. Bridges making location for No. 1 Price & Flowers in section 19. Jim Wells is seeing a resumption of wildcatting with three tests beginning. The latest one is Henry Mode No. 1 Owens. These tests are going in in the northern part of the county near the towns of Orange Grove, Alfred and Alice.

Considerable leasing activity accompanied wildcat play in Hidalgo County and the opening of shallow gas production in Starr County. The shallow sand of the Samfordyce field which has caused considerable trouble to operators due to its high pressure gas, was tested during the week by Navarro Oil Co. No. 2 Guerra and 127 feet of oil with some water was recovered in 15 minutes. This is reported to be the first appreciable show of oil in the sand opening possible new production in the field. The sand was cored in the Navarro well at 1,836-42 feet.

La.-Ark. Fields

(Continued from Page 68)

for the greater part of 1935. Dixie Drilling Co. is moving in rig on its No. 1 Wheatly, section 14-11-26; G. L. Glass, trustee, has derrick up on No. 1 May B. O'Bier, section 32-12-23; Fitzwater and others No. 2 Lafferty, section 17-14-24, is temporarily shut down for rig repairs at 1,986 feet; Murdock-May & Easton No. 1 Conway estate, section 20-12-27, is shut down at 120 feet after setting 12½-inch surface at 80 feet.

A wildcat in Poinsett County, Rockwell Development Co. No. 2 W. A. Smith, section 13-11n-3e, was dry and abandoned at 1,920 feet.

Barnsdall Changes

NEW YORK, Feb. 10.—Proposals to merge the chief operating subsidiary of Barnsdall Corp. of New York with the parent holding company to simplify the corporate structure will be voted on at a special stockholders' meeting in Wilmington, Del., March 17.

Barnsdall Oil Co., operating subsidiary, will be merged with the Barnsdall Corp. which will then change its name to Barnsdall Oil Co., if the changes are approved.

Production Committee Headed by Marx

G. V. D. Marx, Standard Oil Co. of California, San Francisco, has been appointed national chairman of the topical committee on production technology of the American Petroleum Institute, Division of Production. The appointment was made by T. V. Moore, Humble Oil & Refining Co., Houston, Tex., chairman of the central committee on drilling and production practice, who has announced also the appointment of the following district chairmen:

California district, H. C. Pyle, Union Oil Co. of California, Los Angeles; Eastern district, Morris Muskat, Gulf Research & Development Corp., Pittsburgh, Pa.; Rocky Mountain district, F. E. E. Germann, University of Colorado, Boulder, Colo.; Southwestern district, F. E. Heath, Sun Oil Co., Dallas, Tex.; Mid-Continent district, H. H. Power, Gypsy Oil Co., Tulsa, and Foreign district, Joseph A. Holmes, Jr., Lago Petroleum Co., Maracaibo, Venezuela.

K. B. Barnes, Gypsy Oil Co., Tulsa, has been appointed chairman of the Mid-Continent district subcommittee on saturation tests.

Missouri Tax Peak

Revenue from the Missouri gasoline tax last year reached a new high of $10,235,578, a gain of $434,959 over the preceding year, the largest since enactment in 1925 of the law taxing motor fuel 2 cents a gallon.

Stop Those Leaks with GARLOCK 7021

Compressed Asbestos Gaskets

GARLOCK 7021 Gasket Sheet was specially developed by Garlock to resist gasoline, oil, gas and steam at high pressures and high temperatures. It keeps joints tight under the most severe conditions. Place a trial order now!

THE GARLOCK PACKING CO.

Palmyra, New York

Tulsa, Okla. Houston, Tex.
Los Angeles, Calif.

Bureau of Mines Statistics for November, 1935

SUPPLY AND DEMAND OF ALL OILS

(Thousands of barrels of 42 gallons)

NEW SUPPLY:	November 1935	October 1935	November 1934	Jan.-Nov. 1935	Jan.-Nov. 1934
Domestic production:					
Crude petroleum	86,476	88,160	72,399	905,231	833,268
Daily average	2,883	2,844	2,413	2,710	2,495
Natural gasoline	3,598	3,574	3,240	35,204	33,293
Benzol*	178	174	121	1,685	1,577
Total production	90,252	91,908	75,760	942,120	868,138
Daily average	3,008	2,965	2,525	2,821	2,599
Imports:†					
Crude petroleum:					
Bonded warehouses	222	597	485	6,424	4,227
For domestic use	2,020	1,880	2,450	22,479	28,132
Refined products:					
Bonded warehouses	919	918	616	11,073	9,081
For domestic use	321	414	413	7,646	4,167
Total new supply, all oils	93,734	95,717	79,704	989,742	913,745
Daily average	3,124	3,088	2,657	2,963	2,736
Decrease in stocks, all oils	1,669	6,732	10,473	18,962	31,957
DEMAND:					
Total demand	95,403	102,449	90,177	1,008,704	945,702
Daily average	3,180	3,305	3,006	3,020	2,831
Exports:					
Crude petroleum	4,289	4,810	4,680	47,280	38,690
Refined products	8,116	5,950	6,128	69,262	67,236
Domestic demand:					
Motor fuel	35,956	41,401	34,993	398,822	376,525
Kerosene	4,724	4,520	4,451	42,571	39,473
Gas oil and fuel oil	30,615	30,988	29,284	314,361	298,395
Lubricants	1,576	1,520	1,493	18,165	17,093
Wax	80	97	61	855	797
Coke	614	638	511	6,100	6,865
Asphalt	1,037	1,949	1,065	18,553	13,235
Road oil	273	558	201	6,593	6,249
Still gas (production)	4,041	4,272	3,625	46,122	40,601
Miscellaneous	154	147	200	1,882	1,907
Losses and crude used as fuel	3,928	5,298	3,470	41,138	38,536
Total domestic demand	82,998	91,689	79,359	892,162	839,776
Daily average	2,767	2,958	2,645	2,671	2,514
STOCKS:					
Crude petroleum	315,558	317,155	341,403	315,558	341,403
Natural gasoline	3,917	4,384	3,714	3,917	3,714
Refined products	226,711	225,316	225,124	225,711	225,124
Total, all oils	546,186	546,855	570,241	545,186	570,241
Days' supply	171	165	190	181	201

*From Coal Division. †Imports of crude as reported to Bureau of Mines; imports of refined products from Bureau of Foreign and Domestic Commerce.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 gallons)

	November, 1935 Total	November, 1935 Dly. av.	October, 1935 Total	October, 1935 Dly. av.	Jan. Nov. 1935	Jan. Nov. 1934
CRUDE PETROLEUM:						
Runs to stills	83,180	2,773	85,132	2,746	881,251	819,043
MOTOR FUEL:						
Production	40,461	1,349	41,862	1,350	424,494	387,312
Imports:						
Bonded warehouses	.....	.....	.....	.....	20	.....
For domestic use	.....	.....	.....	.....	.....	1
Exports*	3,050	102	2,461	79	27,137	22,951
Stocks:						
Gasoline	46,295	.....	44,373	.....	46,295	42,958
Natural gasoline	3,917	.....	4,384	.....	3,917	3,714
Domestic demand	35,956	1,199	41,401	1,336	398,822	376,525
KEROSENE:						
Production	4,878	163	4,978	161	51,189	49,078
Exports	593	20	378	12	6,137	8,964
Stocks	8,879	.....	9,318	.....	8,879	7,199
Domestic demand	4,724	157	4,520	146	42,571	39,473
GAS OIL AND FUEL OIL:						
Production	30,590	1,020	30,174	972	307,982	298,668
Transfers†	1,286	43	1,546	50	12,253	7,463
Imports:						
Bonded warehouses—for supplies of vessels	919	31	918	30	11,051	7,634
For domestic use	320	11	409	13	7,364	3,695
Exports	3,606	120	2,248	73	25,839	25,648
Stocks	108,847	.....	109,952	.....	108,847	116,421
Domestic demand	30,615	1,021	30,988	1,000	314,361	298,395
Railroad (Class I)‡	(‖)	(‖)	4,438	143	¶38,617	¶36,646
Pub. util. pow. plants‡	1,104	37	1,164	38	10,185	9,485
Other	29,511	984	25,386	819	265,559	252,264
Bunker oil, foreign	2,015	67	2,661	86	26,738	26,638
Bunker oil, coastwise	2,109	70	**2,403	78	23,931	22,859
LUBRICANTS:						
Production	2,453	82	2,463	79	25,237	24,027
Imports	.....	.....	.....	.....	.....	2
Exports	632	21	638	21	7,596	7,167
Stocks	6,857	.....	6,612	.....	6,857	6,869
Domestic demand	1,576	53	1,829	59	18,165	17,093
WAX (thous. of lbs.):						
Production	41,720	1,391	39,200	1,265	409,920	431,200
Imports:						
Bonded warehouses	112	4	.....	.....	496	3,843
For domestic use	112	4	1,118	36	18,229	32,096
Exports	23,840	795	20,021	646	264,795	182,379
Stocks	126,398	.....	124,557	.....	120,398	130,222
Domestic demand	22,243	741	27,380	881	239,498	223,255
COKE (short tons):						
Production	107,800	3,593	118,600	3,826	1,352,400	1,202,600
Stocks	406,200	.....	426,800	.....	406,200	458,700
ASPHALT (short tons):						
Production	248,200	8,273	251,100	11,326	2,644,600	2,685,600
Imports (natural)	.....	.....	.....	.....	24,200	15,500
Stocks	376,700	.....	346,500	.....	376,700	309,300

*Includes benzol, 35,219 bbls. in November, 1935. †Net transfers in California, ‡I.C.C. ‖Not available. ¶Jan.-Oct. §U. S. Geol. Survey. **Revised.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 gallons)

	November, 1935 Total	November, 1935 Daily av.	October, 1935 Total	October, 1935 Daily av.	Jan.-Nov., 1935	Jan.-Nov., 1934
Production	3,598	120	3,574	115	35,204	33,293
Decrease in all stocks	467	16	749	24	299	.....
Total	4,065	136	4,323	139	35,503	33,293
Blended at refineries	3,395	113	3,626	117	26,598	24,250
Run through pipe lines in California	75	3	91	3	665	1,153
Jobbers, exports, etc.	490	16	481	15	5,993	4,764
Increase in all stocks	.....	.....	.....	.....	.....	24
Losses*	105	4	126	4	2,247	3,099
Total	4,065	136	4,323	139	35,503	33,293

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

	November, 1935 Total	November, 1935 Dly. av.	October, 1935 Total	October, 1935 Dly. av.	Jan.-Nov. 1935	Jan.-Nov. 1934
Appalachian:						
Pennsylvania Grade	2,088	69.6	2,225	71.8	23,427	21,971
Other (inc. Kentucky)	549	18.3	607	19.6	6,362	5,966
Lima-N.E. Ind.-Mich.	1,518	50.6	1,730	55.8	14,750	10,662
Ill.-S. W. Ind.	429	14.3	459	14.8	4,660	4,912
Mid-Continent:						
N. La. and Ark.	1,852	61.8	1,878	60.6	18,442	18,568
W. Tex.-S. E. N. Mex.	6,572	219.0	6,513	210.1	68,841	60,987
East Texas	14,140	471.3	14,720	474.8	161,474	168,105
Other (Okla., Kans., N. Tex., etc.)	27,722	924.0	28,715	926.3	307,581	290,006
Gulf Coast	9,635	321.2	9,378	302.5	94,451	76,379
Rocky Mountain	1,677	55.9	1,782	57.5	18,439	16,169
California	20,294	676.5	20,152	650.1	186,804	159,543
Total	86,476	2,882.5	88,160	2,843.9	905,231	833,268

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	November, 1935 Total	November, 1935 Dly. av.	October, 1935 Total	October, 1935 Dly. av.	Jan.-Nov. 1935	Jan.-Nov. 1934
Appalachian:						
Pennsylvania Grade	2,292	76.4	2,276	73.4	23,477	22,542
Other (inc. Ky.)	475	15.8	655	21.1	6,668	6,282
Lima-N. E. Ind.-Mich.	1,795	59.8	1,722	55.6	14,686	11,096
Ill.-S. W. Ind.	419	14.0	608	19.6	5,000	4,627
Mid-Continent:						
N. La. and Ark.	2,204	73.5	1,923	62.0	18,044	20,463
W. Tex.-S.S. N. Mex.	6,675	222.5	6,800	219.3	69,133	64,344
East Texas	15,688	522.9	16,487	531.8	170,000	181,693
Other (Okla., Kans., N. Tex., etc.)	28,671	955.7	30,320	978.1	325,355	288,075
Gulf Coast	9,887	329.6	8,651	279.1	87,825	73,512
Rocky Mountain	1,853	61.8	2,020	65.2	19,349	15,560
California*	17,043	568.1	19,231	620.4	176,652	151,526
Total demand	87,002	2,900.1	90,693	2,925.6	916,154	839,720
Exports	4,289	143.0	4,810	155.2	47,280	38,690
Domestic demand	82,713	2,757.1	85,883	2,770.4	868,874	801,030
Foreign petroleum	2,117	70.6	3,183	102.7	30,057	32,121
Total dom. demand	84,830	2,827.7	89,066	2,873.1	898,931	833,151

*Demand less net transfers from crude.

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS

(Thousands of barrels of 42 gallons)

	November, 1935 Total	November, 1935 Daily av.	October, 1935 Total	October, 1935 Daily av.	Jan.-Nov., 1935	Jan.-Nov., 1934
Arkansas	890	29.7	930	30.0	10,071	10,227
California:						
Huntington Beach	1,300	43.4	1,340	43.2	13,813	13,745
Kettleman Hills	3,319	110.6	3,104	100.1	24,337	19,546
Long Beach	2,391	79.7	2,407	77.7	24,101	20,892
Santa Fe Springs	1,629	54.3	1,698	54.8	14,474	13,468
Rest of state	11,655	388.5	11,603	374.3	110,079	91,892
Total California	20,294	676.5	20,152	650.1	186,804	159,543
Colorado	122	4.1	130	4.2	1,421	1,045
Illinois	369	12.3	391	12.6	3,961	4,158
Indiana	60	2.0	68	2.2	699	776
Kansas	4,385	146.2	4,785	154.4	50,335	42,593
Kentucky	424	14.1	462	14.9	4,864	4,419
Louisiana:						
Gulf Coast	3,759	125.3	3,807	122.8	36,449	21,278
Rest of state	962	32.1	948	30.6	8,370	8,341
Total Louisiana	4,721	157.4	4,755	153.4	44,819	29,619
Michigan	1,452	48.4	1,649	53.2	13,901	9,723
Montana	412	13.7	409	13.2	4,167	3,243
New Mexico	1,804	60.2	1,822	58.8	18,736	15,390
New York	353	11.8	370	11.9	3,870	3,468
Ohio:						
Central and East	252	8.4	286	9.3	2,903	3,009
Northwestern	66	2.2	81	2.6	849	907
Total Ohio	318	10.6	367	11.9	3,752	3,916
Oklahoma:						
Oklahoma City	4,033	134.4	4,348	140.3	50,446	57,905
Seminole	3,920	130.7	4,083	131.7	43,629	35,062
Rest of state	7,366	245.5	7,519	242.5	75,910	72,554
Total Oklahoma	15,319	510.6	15,950	514.5	169,985	165,521
Pennsylvania	1,306	43.6	1,356	43.8	14,539	13,271
Texas:						
Gulf Coast	5,876	195.9	5,571	179.7	58,002	55,101
West Texas	4,801	160.0	4,727	152.5	50,464	45,942
East Texas	14,140	471.3	14,720	474.8	161,474	168,105
Panhandle	1,797	59.9	1,686	54.4	19,461	18,498
Rest of state	6,219	207.3	6,292	203.0	67,780	63,360
Total Texas	32,833	1,094.4	32,996	1,064.4	357,181	351,006
West Virginia	301	10.0	357	11.5	3,603	3,761
Wyoming:						
Salt Creek	516	17.2	527	17.0	5,732	2,970
Rest of state	591	19.7	680	21.9	6,750	3,562
Total Wyoming	1,107	36.9	1,207	38.9	12,482	11,332
Other*	4	.....	4	.....	41	47
Total United States	86,476	2,882.5	88,160	2,843.9	905,231	833,268

*Includes Missouri, Mississippi, Tennessee, and Utah.

RECORD OF WELLS FOR IMPORTANT FIELDS AND DISTRICTS, NOVEMBER, 1935

	Completions Oil	Completions Gas	Completions Dry	Total initial prod (bbls.)	Aver. initial prod. (bbls.)	Drilling end month
Texas	669	32	223	520,600	780	987
East Texas	260	2	13	356,200	1,370	142
Gulf Coast	72	3	25	25,400	390	133
Panhandle	49	13	1	34,600	710	145
West Texas	58	2	19	30,500	530	214
California	60	....	29	36,400	610	233
Kettleman Hills	2	....	....	3,700	1,850	27
Long Beach	5	....	5	600	120	31
Oklahoma	127	6	46	106,100	840	528
Pontotoc Co. (Fitts)	17	....	5	33,400	1,960	62
Seminole district	20	....	1	6,900	340	48
Louisiana	37	8	18	75,800	2,050	154
Gulf Coast	22	....	9	15,500	700	67
Rodessa	7	....	....	28,100	4,010	†46
Other states	411	89	105*	284,600	570	1,051
Total United States:						
Nov., 1935	1,304	135	421	973,400	750	2,953
Oct., 1935	1,218	115	401	820,900	670	2,979
Nov., 1934	1,036	154	404	701,700	680	2,819
Jan.-Nov., 1935	14,168	1,258	4,478	10,995,100	780	2,953
Jan.-Nov., 1934	11,461	1,256	3,935	9,975,600	870	2,819

*From The Oil and Gas Journal and California office of the American Petroleum Institute. †Includes wells drilling in Texas.

STOCKS OF CRUDE PETROLEUM BY DISTRICTS AND GRADES

(Thousands of barrels of 42 gallons)

	Nov. 30, 1935	Oct. 31, 1935	Nov. 30, 1934
At refineries by location:			
East Coast: Domestic	9,782	10,398	10,420
Foreign	2,203	2,053	2,447
Appalachian	1,458	1,618	1,331
Indiana, Illinois, Kentucky, Michigan	3,187	3,452	3,955
Oklahoma, Kansas, and Missouri	4,642	4,471	5,822
Texas: Inland	1,607	1,465	1,968
Gulf Coast: Domestic	10,727	10,493	10,704
Foreign	497	544	448
Louisiana Gulf Coast: Domestic	2,477	3,539	3,544
Foreign	353	331	398
Arkansas and Inland Louisiana	1,041	995	679
Rocky Mountain	12,521	12,751	13,537
California	8,506	7,437	9,601
Total	59,001	59,188	64,854
At refineries by origin:			
Pennsylvania Grade	1,341	1,389	1,203
Other Appalachian (inc. Kentucky)	559	482	620
Lima, N. E. Indiana, Michigan	513	640	365
Illinois, S. W. Indiana	84	69	104
North Louisiana and Arkansas	2,227	2,708	1,785
West Texas and S. E. New Mexico	3,024	3,080	4,064
East Texas	5,657	5,720	6,586
Oklahoma, Kansas, North Texas, etc.	13,341	13,317	16,801
Gulf Coast	8,196	8,682	6,923
Rocky Mountain	12,490	12,736	13,509
California	8,506	7,437	9,601
Foreign	3,053	2,928	3,293
Total	59,001	59,188	64,854
Pipe line and tank farm:			
Pennsylvania Grade	3,491	3,645	3,824
Other Appalachian (inc. Kentucky)	411	416	530
Lima, N. E. Indiana, Michigan	813	968	963
Illinois, S. W. Indiana	11,046	11,056	11,367
North Louisiana and Arkansas	8,207	8,093	8,257
West Texas and S. E. New Mexico	26,437	26,469	25,351
East Texas	17,133	18,588	25,837
Oklahoma, Kansas, N. Texas, etc.	121,067	122,065	139,249
Gulf Coast	17,168	16,949	11,860
Rocky Mountain	14,638	14,568	14,577
California	25,809	24,367	26,137
Total	246,220	247,184	267,952
Lease (producers') stocks	10,337	10,783	8,597
Total refinable crude in the United States	315,558	317,155	341,403

MOVEMENT OF CRUDE OIL AND REFINED PRODUCTS TO EASTERN PORTS IN THE UNITED STATES

(Thousands of barrels of 42 gallons)

	November, 1935	October, 1935	November, 1934	Jan.-Nov., 1935	Jan.-Nov., 1934
California to East Coast:					
Gasoline	689	389	1,002	6,858	8,124
Kerosene	31	72	248	1,061	1,507
Gas oil and fuel oil	76	79	1,039	798	13,809
Lubricants	4	.....	6	72	62
Miscellaneous	1	66	1	515	131
Total	851	606	2,296	9,304	23,633
Gulf to East Coast:*					
Crude	11,311	11,143	(†)	129,507	(†)
Gasoline‡	7,039	7,112	(†)	68,868	(†)
Kerosene	1,873	1,467	(†)	12,574	(†)
Gas oil and fuel oil	6,028	6,022	(†)	55,019	(†)
Lubricants	246	251	(†)	1,969	(†)
Miscellaneous	11	.....	(†)	85	(†)
Total	26,508	25,995	(†)	268,013	(†)
Foreign crude to East Coast:					
Colombia	105	.....	.....	105	2,921
Ecuador	.....	.....	.....	.....	79
Mexico	113	274	192	2,994	4,077
Trinidad	.....	.....	.....	117	23
Venezuela	1,874	1,773	2,421	20,729	22,512
Total	2,092	2,047	2,613	23,045	29,612
Foreign crude to Gulf Coast:					
Colombia	.....	430	183	3,600	725
Mexico	76	.....	119	755	1,311
Venezuela	74	.....	.....	1,503	711
Total	150	430	302	5,858	2,747

*From Division of Investigations, Department of the Interior. †Not available. ‡Includes natural gasoline.

A JOINT that becomes an integral part of the pipe line—a joint that is as strong as the pipe—a joint that will last as long as the pipe . . . that is the kind of joint you can produce with Taylor Weldells.

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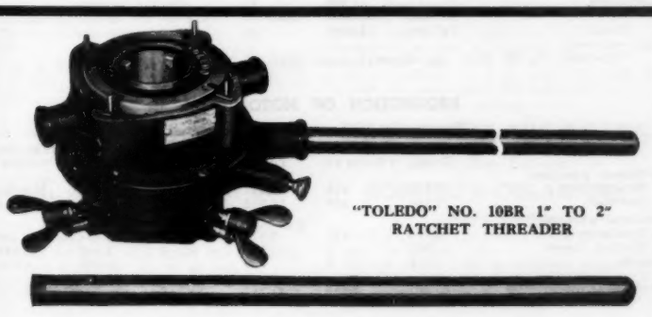

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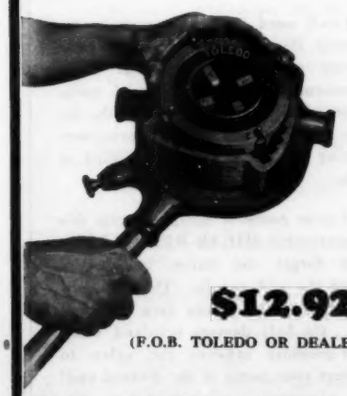

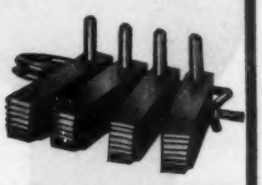

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TOLEDO, OHIO New York Office, 72 Lafayette Street

RUNS TO STILLS AND OUTPUT OF REFINERIES, NOVEMBER, 1935

(Thousands of barrels of 42 gallons)

INPUT—	Crude runs: Domestic	Crude runs: Foreign	Crude runs: Total	Unfin. rerun (net): Crude gaso.	Unfin. rerun (net): Other	Natural gasoline
East Coast	12,996	1,948	13,954	— 63	—83	262
Appalachian	3,343	.....	3,343	— 1	—75	34
Ind., Ill., Ky., etc.	10,642	.....	10,642	96	22	375
Okla., Kans., Mo.	9,056	.....	9,056	—112	91	696
Texas Inland	5,450	.....	5,450	1	—50	528
Texas Gulf	17,348	47	17,395	— 96	790	340
Louisiana Gulf	3,860	131	3,991	— 38	38	25
Ark. and La. Inland	1,577	.....	1,577	15	—99	49
Rocky Mountain	1,650	.....	1,650	— 3	—22	135
California	16,122	.....	16,122	—125	4	*1,026
Total	81,054	2,126	83,180	—326	616	3,470

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thous. of lbs.)
East Coast	6,333	678	1,435	3,558	717	18,769
Appalachian	1,574	262	212	435	464	7,280
Ind., Ill., Ky., etc.	6,324	432	1,098	1,601	238	2,640
Okla., Kans., Mo.	5,534	677	635	1,736	295	3,080
Texas Inland	2,146	264	428	1,691	20	.280
Texas Gulf	7,892	1,670	2,274	4,826	474	2,360
Louisiana Gulf	1,489	297	601	1,028	69	2,530
Ark. and La. Inland	697	94	108	443	21	.....
Rocky Mountain	1,043	48	65	320	14	2,800
California	6,314	358	1,742	7,640	141	.....
Total	40,260	4,878	8,598	23,278	2,453	41,720

OUTPUT—Cont'd.	Coke (tons)	Asphalt (tons)	Road oil	Still gas	Miscellaneous	Shortage
East Coast	1,600	94,200	6	767	27	—44
Appalachian	2,000	9,300	....	176	21	65
Ind., Ill., Ky., etc.	53,600	53,200	13	788	13	55
Okla., Kans., Mo.	31,200	4,900	39	443	10	218
Texas Inland	3,400	3,300	.....	113	6	225
Texas Gulf	11,400	18,700	1	1,081	22	107
Louisiana Gulf	5,400	12,400	.....	155	1	139
Ark. and La. Inland	200	10,300	30	41	8	42
Rocky Mountain	9,000	3,300	50	96	2	50
California	.....	33,600	120	381	32	114
Total	107,800	243,200	259	4,041	143	977

* Includes 75,000 bbls. run through pipe lines.

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 gallons)

	November, 1935: Total	November, 1935: Daily av.	October, 1935: Total	October, 1935: Daily av.	Jan.-Nov., 1935	Jan.-Nov., 1934
Refinery gasoline:						
Straightrun	18,826	626	19,567	629	200,194	189,359
Cracked	17,964	599	18,732	604	189,565	166,173
Natural gasoline:						
Production	3,598	120	3,574	115	35,204	33,293
Deduct losses	105	4	125	4	2,247	3,090
Benzol	178	6	174	6	1,685	1,577
Total motor fuel	40,461	1,349	41,862	1,350	424,404	387,312

How's Your Nail Supply —for 1936?

High Pressure Type for Slush Pumps

You'll need a nail for every pump blowup this Valve prevents for you during the year. And that could represent a fair size bag of nails, what with water ends, manifolds, rotary hoses and other pump parts combatting the deep, pressure drilling of today.

If your pump is equipped with this Abercrombie SHEAR-RELIEF Valve then forget the valve, and worry about the nail supply. The SHEAR-RELIEF Valve takes care of itself .... the only damage involved, when over-pressure relieves the valve to protect your pump, is the sheared nail!

A pocket pamphlet (three minutes' reading) will tell you how it is slashing pump maintenance costs for operators all over the oil country.

FLUID-PISTON SLUSH PUMPS

ABERCROMBIE PUMP CO.

GULF BLDG. PISTON TYPE

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	November, 1935	October, 1935	November, 1934	Jan.-Nov., 1935	Jan.-Nov., 1934
Motor fuel turned into lines	4,677	4,618	4,079	46,515	41,922
Motor fuel delivered from lines	4,385	4,591	4,051	45,990	41,848
Shortage	25	38	3	262	99
Stocks in lines and working tanks end of month	2,306	2,039	1,290	2,306	1,290

CRACKED OPERATIONS

	Bbls.
Fresh cracking stock charged to stills:	
Crude	4,910,000
Other oils	39,585,000
Gasoline produced by cracking	17,964,000
Fuel oil produced by cracking	17,232,000

STOCKS OF CRUDE PETROLEUM BY STATES

(Thousands of barrels of 42 gallons)

	Location*: November, 30, 1935: At refineries	At tank farms and in pipe lines	On leases	Total	Oct. 31, 1935 Total	Origin†: Nov. 30, 1935 Total	Oct. 31, 1935 Total
Arkansas	675	3,169	250	4,094	3,945	6,461	6,564
California	8,506	25,809	3,331	37,646	35,591	37,646	35,591
Colorado	316	107	30	453	429	510	506
Georgia‡	625	.....	.....	625	608	.....	.....
Illinois	1,161	10,391	105	11,657	11,586	11,199	11,196
Indiana	629	1,908	8	2,545	2,774	44	37
Kansas	1,673	9,778	485	11,936	12,054	4,893	$5,983
Kentucky†	530	288	40	858	803	836	772
Louisiana‖	3,196	5,971	405	9,572	10,380	8,987	9,435
Maryland	1,056	.....	.....	1,056	1,164	.....	.....
Massachusetts**	880	.....	.....	880	1,066	.....	.....
Michigan	167	377	105	649	759	886	1,133
Missouri††	180	3,275	.....	3,455	3,547	.....	.....
Montana	217	799	105	1,121	1,182	1,104	1,183
New Jersey	5,127	316	.....	5,443	5,478	.....	.....
New Mexico	17	366	315	698	635	5,235	5,137
New York	1,299	163	18	1,479	1,520	453	487
Ohio	818	6,578	70	7,466	7,594	1,058	1,038
Oklahoma	2,789	67,499	1,785	72,073	73,260	95,832	96,462
Pennsylvania	4,266	1,685	100	6,051	5,941	2,447	2,611
Texas	12,831	92,253	2,705	107,789	108,592	107,037	$108,970
Utah	198	.....	.....	198	198	.....	.....
West Virginia	72	1,781	130	1,983	2,088	1,911	1,956
Wyoming‡‡	11,773	13,708	360	25,831	25,961	25,966	26,065
Foreign	.....	.....	.....	.....	.....	3,053	2,928
U. S. total	59,001	246,220	10,337	315,558	317,155	315,558	317,155

* Segregated by states of location regardless of origin. † Segregated by states of production (origin) regardless of location. ‡ Includes Delaware, South Carolina, and Virginia. § Revised. ‖ Includes Tennessee. ¶ Includes Alabama. ** Includes Rhode Island. †† Includes Iowa. ‡‡ Includes Nebraska and South Dakota.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, NOVEMBER, 1935

(Thousands of barrels of 42 gallons)

	Straightrun: Total	Straightrun: Per cent (*)	Straightrun: Per cent (†)	Cracked: Total	Cracked: Per cent (*)	Cracked: Per cent (†)	Nat. gasoline: Total	Nat. gasoline: Per cent (†)	Gasoline: Total	Gasoline: Per cent (*)
East Coast	2,451	17.6	38.7	3,620	25.9	57.2	262	4.1	6,333	43.5
Appalachian	801	23.9	50.8	741	22.2	47.0	34	2.2	1,576	46.1
Ind., Ill., etc.	26,14	24.6	41.3	3,337	31.3	52.8	375	5.9	6,326	55.9
Okla., Kans., Mo.	2,707	29.9	48.9	2,131	23.5	38.5	696	12.6	5,534	53.4
Texas Inland	1,720	31.5	54.7	898	16.5	28.5	528	16.8	3,146	48.0
Texas Gulf	3,219	18.5	41.3	4,243	24.4	54.4	340	4.3	7,802	42.9
Louisiana Gulf	766	19.2	51.4	698	17.5	46.8	25	1.8	1,489	36.7
Ark. and La. Inland	365	23.1	52.4	283	18.0	40.6	49	7.0	697	41.1
Rocky Mountain	472	28.6	45.3	436	26.4	41.8	135	12.9	1,043	65.0
California	3,711	23.0	58.8	1,577	9.8	25.0	1,026	16.2	6,314	32.8
Total	18,826	22.6	46.8	17,964	21.6	44.6	3,470	8.6	40,260	44.2

*Per cent of crude run. †Per cent of total gasoline output.

STOCKS HELD BY REFINING COMPANIES, NOVEMBER 30, 1935

(Thousands of barrels of 42 gallons)

	Finished gasoline: At refineries	Finished gasoline: Bulk and pipe lines	Unfinished gasoline	Total gasoline	Kerosene	Gas oil and distillate fuel oils
East Coast	4,225	8,079	907	13,211	2,626	5,771
Appalachian	1,095	1,101	317	2,516	241	216
Ind., Ill., Ky., etc.	3,741	3,889	610	8,240	545	2,367
Okla., Kans., Mo.	3,386	1,786	533	5,704	665	1,114
Texas Inland	1,624	24	252	1,900	208	394
Texas Gulf	4,751	493	1,582	6,826	1,996	4,602
Louisiana Gulf	809	462	258	1,529	687	1,707
Ark. and La. Inland	233	85	16	334	65	112
Rocky Mountain	837	.....	100	937	124	163
California	7,339	2,334	1,176	10,849	1,724	6,817
Total	28,043	18,252	5,751	52,046	8,879	23,263

	Residual fuel oil	Lubricants	Wax (thous. of pounds): Crude scale	Wax (thous. of pounds): Refined	Wax (thous. of pounds): Total
East Coast	6,090	2,169	18,018	16,747	34,765
Appalachian	330	810	16,741	2,084	18,825
Ind., Ill., Ky., etc.	2,504	454	14,180	2,059	16,239
Okla., Kans., Mo.	3,330	512	2,323	883	3,206
Texas Inland	1,865	103	.....	139	139
Texas Gulf	7,311	1,634	2,673	22,612	25,285
Louisiana Gulf	3,164	102	686	1,373	2,059
Ark. and La. Inland	385	31	.....	.....	.....
Rocky Mountain	450	99	18,666	1,214	19,880
California	60,075	943	.....	.....	.....
Total	85,584	6,857	73,287	47,111	120,398

	Coke (tons)	Asphalt (tons)	Road oil	Miscellaneous	Other unfinished	Natural gasoline
East Coast	18,700	121,600	30	43	9,261	176
Appalachian	11,100	11,400	6	36	1,987	2
Ind., Ill., Ky., etc.	63,000	74,200	63	11	5,584	54
Okla., Kans., Mo.	42,100	10,800	153	17	5,315	75
Texas Inland	7,500	6,000	54	2	1,111	15
Texas Gulf	77,900	13,200	15	25	10,463	168
Louisiana Gulf	35,700	38,200	1	4	1,970	.....
Ark. and La. Inland	100	25,900	23	2	402	6
Rocky Mountain	77,400	8,600	242	5	1,648	36
California	74,500	66,800	181	56	5,769	1,443
Total	408,200	376,700	868	201	43,470	1,975

Grand total stocks refined products 225,711,000 bbls.

WILDCAT OPERATIONS

KANSAS WILDCATS

Week Ending February 8

(Descriptions are East unless marked otherwise)

Barton County

Buchanan & Alexander No. 1 Langfeld, NE NE SW sec. 14-20-11w.
Drlg. 1,350 ft.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w.
Rig.

Hilligoss et al No. 1 Schmidt, NE cor. sec. 27-19-11w.
C.O. at 43 ft.

George W. Hinkle No. 1 Smith, SW NW NW sec. 1-17-11w.
Rigging up.

Morgan & Flynn et al No. 1 Amerine, NE cor. sec. 14-19-14w.
Fishing 2,530 ft.

Morgan & Flynn et al No. 1 Zimmer, SE SE SW sec. 20-19-14w.
S.D. 826 ft.

Murphy & Morgan No. 1 Robinson, NE NE SW sec. 21-16-14w.
Rigging up.

Roy Ramsey et al No. 1 Hunt, NW cor. sec. 10-18-11w.
Location.

Torry & Feaster No. 1 Kimpler, SE NE NE sec. 31-18-11w.
Siliceous 3,423-41 ft.; T.D.; hole full of oil; not tested.

Torry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w.
Siliceous lime 3,430-32½ ft.; T.D.; potential; pumped 246 bbls. oil in 18½ hrs.

Wakefield & Johnson No. 1 Bumm, SW SW NE sec. 23-19-12w.
Moving in material.

Yarnell, Carlson & Spencer No. 1 Bloomer, NE NE NW sec. 26-17-11w.
K.C. lime 2,994 ft.; Siliceous 3,257-73 ft.; 2,000 ft. oil in hole; to be acidized.

Butler County

National Ref. Co. No. 1 McCullough, NE NE SW sec. 1-28-6.
Mississippi lime 2,759 ft.; Wilcox 3,169-75 ft.; T.D.; 1,300 ft. oil in hole in 10 hrs.; pumped 50 bbls. oil per day.

Pryor & Lockhart No. 1 Boucher, NW cor. sec. 19-27-4.
Drlg. 2,232 ft.

Cowley County

Aylward & Trees Oil Co. et al No. 1 Shields, SW cor. sec. 17-32-6.
U.R. 8-in. csg. at 2,330 ft.

Penwest Oil Co. No. 1 Clover, NE SE SE sec. 8-31-7.
19,000,000 ft. gas 1,430-60 ft.; showing oil and gas 2,249-51 ft.; S.D. 2,505 ft.

Reed & Milligan No. 1 Houston, NW NW SW sec. 10-31-4.
C.O. 2,648 ft.

Roth & Faurot No. 1 Guthrie, NW cor. Lot 14, sec. 30-32-8.
Fishing 835 ft.

Roth & Faurot No. 1 Sherwood, NE NW SW sec. 11-31-4.
Sand 3,007-12 ft.; drlg. 3,037 ft.

A. M. Scroggin No. 1 Brady Est., NE NE SE sec. 30-31-3.
Location.

E. B. Shawver et al No. 1 Wilson, S½ NE SE NE sec. 11-30-4.
R.U. machine.

Shawver & Wilt No. 1 Baruth, SW NW NE sec. 8-34-3.
Old well deepening from 1,893 ft.; H.F.W. 1,905-25 ft.; T.D.; S.D.

Earl Wakefield No. 1 Wilson, NW cor. sec. 4-32-3.
Rigging up.

Winkler, Koch et al No. 1-B Harlan, C S½ NW NE sec. 13-31-7.
S.D. 2,750 ft.

Ellis County

Lario Oil & Gas et al No. 1 Walter, SE NE SW Sec. 3-12-18w.
Rigging up.

Parrish & Denman No. 1 Walter, SE SW SE sec. 14-13-17w.
Location.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-13-18w.
Rigging up.

Ellsworth County

Smith & Ash and Phillips Pet. Co. No. 1 Splitter, SW cor. sec. 15-17-9w.
Drlg. 60 ft.

Graham County

Vickers Pet. Co. & Phillips Pet. Co. No. 1 Hutton, 430 ft. from E line and 330 ft. from N line of SE¼ Sec. 29-8-22w.
T.D. 1,375 ft.; S.D.

Greenwood County

E. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-15.
S.D. 925 ft.

Hale & Reese No. 1 Needles, NE SE NW sec. 12-25-10.
Rig.

Mohawk Oil Co.'s No. 1-A Edgar, NE NE SW sec. 3-28-8.
Mississippi lime 2,540 ft.; 200 ft. of oil in hole, 2,541-42 ft.; T.D. 2,548 ft.; 300 ft. of oil in hole in 15 hrs.; swbd. 3 bbls. oil per day; acidized.

Sharpless et al No. 1 Cook, NW NW NW sec. 15-24-10.
Spudded and S.D.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW Sec. 17-35-8w.
Mississippi 4,775 ft.; cored at 4,875-90 ft.; slight showing of oil; to test.

Harvey County

Empire O. & R. Co. et al No. 1 Webster, SE SE SW sec. 8-24-2w.
W.O.C. 247 ft.

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w.
O.W.D.; T.D. 587 ft.; S.D. 620 ft.

Ok-Tex Oil Co. No. 1 Osborne, C SE SE Sec. 6-23-3w.
Chat 3,605 ft.; corrected; T.D. 3,697 ft.; P.B. to 2,875 ft.; W.O.C.

Western Kansas O. & R. Co. No. 1 Warkentin, C SW SW sec. 1-23-2w.
Drlg. 80 ft.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-33w.
Rig.

Kearny County

L. F. Meyers et al No. 1 Beaty, C NW sec. 28-25-36w.
Rotary rig.

Kingman County

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w.
Old well deepening; drlg. 4,583 ft.

Marion County

Milton et al No. 1 Young, NW NW SE sec. 17-21-3.
Drlg. 59 ft.

Norton County

Helmerich & Payne et al No. 1 Collins, C NE Sec. 11-3-25w.
Drlg. 3,316 ft.

Lario O. & G. Co. and Elwell No. 1 Kennedy, SW SW NW Sec. 22-3-23w.
Drlg. 3,010 ft.

Pratt County

Lario O. & G. Co., Ewell and Atlantic O. P. Co. No. 1 Lemon, SE SE NW Sec. 12-29-13w.
Drlg. 3,015 ft.

Reno County

Derby Oil Co. No. 1 Schrock, SE SE SW sec. 27-24-5w.
Simpson 3,348 ft.; H.F.W. 3,378 ft.; P.B. 3,350 ft.; more wtr.; Siliceous 3,943 ft.; T.D. 3,951 ft.; P.B. to 3,812 ft.; perforated csg. 3,453 ft.; produced 10 bbls. wtr. an hr.

Foraker et al No. 1 Hiett, SE SW NE Sec. 34-24-4w.
S.D. 1,780 ft.

McPherson Drlg. and Derby Oil Co. No. 1 Scheuchzer, NE SE SW Sec. 17-24-4w.
Chat 3,307 ft.; T.D. 3,391 ft.; showing oil; acidized; not tested.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w.
Building rig.

Rose Spring & Foraker No. 1 Brauer, SW SW SE Sec. 4-26-4w.
Missner 4,060 ft.; Viola lime 4,106-13 ft.; T.D.; 1,000 ft. fluid in hole; acidized; not tested.

Rice County

Continental Oil Co. and Empire Oil & Ref. Co. No. 1 Nickel, NE SW SW sec. 13-18-8w.
Setting 12-in. pipe at 165 ft.

Day No. 1 Mason, NW NE NE Sec. 28-21-7w.
Chat 3,388-3,400 ft.; flowed 90 bbls. oil in 45 min.; swbd. 110 bbls. in 3 hrs.

Duwe & Schneider No. 1 Wright, NW cor. sec. 36-21-7w.
Spudded; S.D.

Grattan et al No. 1 Williams, SW SW NW sec. 17-18-7w.
Drlg. 1,020 ft.

Permian Oil Co. No. 1 Monroe, C NE NE Sec. 9-20-7w.
S.D. at 1,110 ft.

Permian Oil Co. No. 1 Conner, C NE NE sec 28-19-7w.
K.C. lime 2,890 ft.; chat 3,240-66 ft.; Missner 3,470 ft.; H.F.W. 3,470-75 ft.; Siliceous 3,630 ft.; T.D. 3,640 ft.; P.B. 3,210 ft.; 400 ft. oil in hole; acidized; not tested.

C. E. Skiles et al No. 1 Edwards, NW NW NE Sec. 3-18-8w.
Siliceous 3,278-81 ft.; T.D.; potential production 550 bbls. of oil in 24 hrs.; deepened to 3,282 ft. and oil increased; no test.

Tabor-Coleman and Atlantic O. P. Co. No. 1 Tharp, C NW NW Sec. 33-21-6w.
K.C. lime 2,925 ft.; Siliceous 4,072-97 ft.; T.D.; dry and abd.

Vernon Oil & Gas and Cusco Oil Co. No. 1 Boldt, NW SW NW Sec. 10-19-10w.
Drlg. 2,880 ft.

W. E. Witt's No. 1 Hall, SE SE NW sec. 3-20-9w.
Spudded and S.D.

Rooks County

F. A. Gillespie & Sons No. 1 Low, NE NE NW Sec. 12-6-18w.
Topeka lime 2,586 ft. (cor.); T.D. 3,162 ft.; pumped 60 bbls. of oil and was acidized; acid ate out csg. seat; wtr. broke in; a retest was to be made.

Murfin et al No. 1 Wasthusin, NE NE SE Sec. 19-9-16w.
S.D. 970 ft.

Pryor & Lockhart's No. 1 Bradley, SW SW NE sec. 31-10-16w.
Drlg. 3,200 ft.

Rush County

John McCole et al No. 1 Roth, NW NW SW sec. 21-16-18w.
Rig.

Torrey & Feaster et al No. 1 Winget, SE cor. Sec. 15-16-16w.
Rig.

Russell County

R. G. Berry et al No. 1 Cook, NE NE SE sec. 19-11-13w.
Spudded and S.D.

Bridgeport Machine Co. et al No. 1 Wyckoff, SE NW NE sec. 27-11-13w.
Drlg. 85 ft.

Central Petroleum Co.'s No. 1 Benso, SE SE SW sec. 9-14-15w.
Oswald 3,035 ft.; T.D. 3,096 ft.; acidized; pumped 215 bbls. oil in 20 hrs.

Coralena Oil Co. No. 1 Disken, SE cor. Sec. 30-15-13w
Set whipstock 2,953 ft.; W.O.C.

Eisenhour & Shaffer No. 1 Humes, SW SW SW sec. 6-14-12w.
Rig.

Empire O. & R. et al No. 1 Major, SE cor. Sec. 11-14-12w.
Spudded and S.D.

Hartman and Blair No. 1 McAllister, SW SW SE sec. 24-13-15w.
Moving in material.

Hartman and Blair No. 1 Boxberger "B," NE SE SW sec. 5-14-14w.
Drlg. 430 ft.

Hartman & Blair et al No. 1 Boxberger, NW NW SW Sec. 32-13-14w.
Topeka lime 2,760 ft.; drlg. 3,005 ft.

Sam Murphy et al's No. 1 Enschuts & Schaffer, SW cor. Sec. 10-16-13w.
Pay 2,465-68 ft.; produced 2 bbls. of oil an hr.; C.O. at 2,565 ft.

Charles Newbold No. 1 Krug, SE SW SE sec. 4-15-14w.
Rig.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w.
Tarkio lime 2,515 ft.; T.D. 2,550 ft.; swbd. 5 bbls. oil per hr., and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Phillips Pet. Co. and Sinclair Prairie Oil Co. No. 1 Driscoll, NW NW SE Sec. 31-15-11w.
Oswald 3,031-41 ft.; S.D. 3,332 ft.

P. G. Reynolds No. 1 Fredrickson, SE SW SE sec. 6-13-12w.
S.D. 500 ft.

Warren Oil Co. No. 1 Bratton, SE cor. Sec. 25-11-13w.
Oswald lime 2,970 ft.; showing of oil and gas 3,125 ft.; drlg. 3,355 ft.

Winkler & Koch No. 1 McAllister, NE NE SE Sec. 9-13-13w.
Rig.

Sedgwick County

T. C. Johnson No. 1 Jansen, SW SW NW sec. 11-28-2.
Rigging up.

Stafford County

L. A. Farris et al No. 1 Snyder, SE SE NW sec. 3-21-11w.
U.R. 6-in. csg., 2,065 ft.

Herndon Drlg. Co. and Atlantic O. P. Co. No. 1 Russell, C SE NW sec. 20-21-14w.
Simpson 3,714 ft.; Siliceous 3,770 ft.; showing of oil 3,784-88 ft.; W.O.C. 3,788 ft.

Sumner County

Helmerich & Payne No. 1 Wright, SE SE NW Sec. 10-32-2.
Simpson 3,440 ft.; showing of oil 3,474-77 ft.; drlg. cmt.

D. L. Husted et al No. 1 Evers, SE SE NE sec. 27-31-2.
S.D. 200 ft.

Morgan et al No. 1 Veail, SE SW NE sec. 27-32-2.
Drlg. 2,110 ft.

Orcutt & Stewart's No. 1 Newton, SE cor. Sec. 21-30-2.
S.D. 550 ft.

D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 25 ft. from S line of NW Sec. 15-35-1w.
S.D. at 2,670 ft.

Trego County

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.
K.C. lime 3,548 ft.; showing of oil and gas 3,643-50 ft.; 150 ft. wtr. in hole at 3,722 ft.

Continental Oil Co. No. 1 Cave, E½ E½ NW sec. 26-11-23w.
Cellar.

Vickers et al's No. 1 Secor, NW NW NW Sec. 25-15-24w.
H.F.W. 4,726 ft.; cmtd. hole to 4,340 ft.; acidized and waiting.

Woodson County

Lewis et al No. 1 Riggs, SW cor. sec. 10-24-14.
S.D. at 900 ft.

J. F. Mergen et al No. 1 Vermont Savings Bank, NE NW NE sec. 15-25-14.
Mississippi lime 1,564 ft.; drlg. 1,610 ft.

C. L. Sheedy No. 1 Baker, SE SE NW sec. 2-26-14.
R.U. machine.

Sheedy et al No. 2 Warner, SW SW SW sec. 21-25-14.
Sand 1,426-60 ft.; T.D. 1,500 ft.; P.B. to 1,460 ft.; shot with 150 qts.; C.O.

OKLAHOMA WILDCATS

Week Ending February 8

NORTHERN OKLAHOMA

Alfalfa County

Tex-O-Kan. Oil Co. No. 1 Acre, C SW NE sec. 14-24-11w.
Sylvan shale 7,065 ft.; Wilcox sand 7,259 ft.; Schlumberger test showed porosity at 5,910 ft. and at 6,400-6,500 ft.; T.D. 7,309 ft.; S.D. for orders.

Beaver County

Anderson & Kerr et al No. 1 Davis, C SW SE sec. 36-5-26 (Cimarron Meridian).
Drlg. 6,330 ft.

Beckham County

Speed & Barker No. 1 Stephens, SW SW NW sec. 19-9-22w.
Rig on ground.

Wood Pet. & Royalty Corp. No. 1 Blair, C NW SE sec. 32-9-26w.
Drlg. 1,305 ft.

Coal County

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10.
Sand 1,520 ft.; McAllister series 1,600 ft.; Atoka shale 2,380 ft.; drlg. 3,180 ft.

Comanche County

T. H. McCasland et al No. 1-A Smith, SW cor. sec. 12-2n-10w.
Moving in tools.

N. E. Mieling No. 1 Miller, NE NE SW sec. 23-4-12w.
T.D. 530 ft.; S.D. for csg.

John Nicholas No. 1 Householder, NE NE SW sec. 8-2-10w.
T.D. 960 ft.; S.D.

Geo. Pace et al No. 1 Spencer, SW cor. SE sec. 21-3-10w.
T.D. 4,164 ft. in Granite wash; P.G. to 1,850 ft.; re-cmtd. hole from 1,853 to 1,684 ft.; drlg. cmt. 1,650 ft.

J. Phillips No. 1 Head, N½ NW SW sec. 29-4-11w.
Rigged up; S.D.

Garfield County

Herndon Drlg. Co. et al No. 1 Branson, SW SW SE sec. 23-24-3w.
Cellar and pits.

Earl McBride et al No. 1 Gage estate, SE NW sec. 27-22-3w.
S.D. at 1,090 ft.

W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w.
Drlg. 3,810 ft.

Stanolind O. & G. Co. et al No. 1 Brunken, SW SW NE sec. 32-23-4w.
Cellar and pits.

Garvin County

Chas. E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3.
Old T.D. 2,405 ft.; to deepen.

Suggett & McElreath No. 1 Hyre, NE NE SE sec. 23-3-1w.
Drlg. 3,120 ft.

Grant County

Southern Oil Co. et al No. 1 Allen, SW SE sec. 36-26-4w.
S.D. 5,505 ft.

Hughes County

Brady Oil Co. No. 1 Culver, NE SE NW Sec. 28-7-9.
Location.

W. P. Canavan No. 1 Meaders, SE NE SE sec. 5-8-10.
Gilcrease 2,600 ft.; Wapanucka 3,050 ft.; T.D. 3,056 ft.; setting csg.

M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-8-9.
Wapanucka 3,423 ft.; Cromwell 3,452 ft.; T.D. 3,464 ft.; 2 bailers wtr. an hr.; P.B.

Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9.
Location.

Schumacher et al No. 1 Schumacher, NE NW NE Sec. 23-5-10.
S.D. 1,610 ft.

Bivalis et al No. 1 Montgomery, NW SW NW Sec. 7-9-9.
T.D. 2,040 ft.; U.R. 8-in. pipe.

Kay County

Bea Head et al No. 1 Bealveal, SW cor. Sec. 8-25-1w.
Rigging up rotary at 50 ft.

Black Gold Pet. Co. No. 1 Cooley, NE NW SW sec. 25-28-4e.
S.D. 860 ft.

Kiowa County

Beeler & Klein No. 1 Van Kirk, NE SW Sec. 35-7-15w.
T.D. 607 ft.; P.B. 380 ft.; testing; showing wtr.; S.D. for pipe.

Burns & Moore's No. 1 Webster, C NE NE sec. 2-6-17w.
Sand showing oil at 450-53 ft. and 456-58 ft.; T.D.; production est. at 3 bbls. daily; R.U. to pump.

Rajah Oil Co. No. 3 Stone, C SE NE sec. 34-7-17w.
Salt water 1,480-1,547 ft.; T.D.; plugged back to 960 ft.; acidized; production est. at 25 bbls. of oil a day.

J. C. Shaffer et al No. 1 Slusher, NW SW NW sec. 35-7-17w.
Spudded.

Lincoln County

Fred McDuff's No. 1 Jacob, NE NE SE Sec. 10-15-5.
Drlg. 2,025 ft.

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Crawford, NE NE SE Sec. 35-15-2.
First Wilcox, 5,110 ft.; second Wilcox, 5,218 ft.; T.D. 5,229 ft.; flowed 131 bbls. in 10 hrs., 20% oil, 80% wtr. and mud; 18,000,000 ft. gas; shut in.

Texas Co.'s No. 1 Andrew, NW NE SE sec. 28-14-5.
2,250,000 ft. of gas 3,900 ft.; T.D. 4,188 ft.; P.B. to 3,925 ft.; 2,000,000 ft. gas; shut in.

Logan County

R. H. Pierce No. 1 Kihega, SW cor. sec. 7-17-1.
Drlg. 1,225 ft.

Springrose Drlg. Co. No. 1 Wright, SW SW NW sec. 32-15-1.
Viola lime 5,539 ft.; first Wilcox 5,679 ft.; second Wilcox 5,819 ft.; T.D. 5,827 ft.; ran Schlumberger; no showing.

Stanolind O. & G. Co., Amerada Pet. Corp. and Eason G. & R. Co. No. 1 Gragg, SW SW NE sec. 20-18-4w.
Viola lime 5,525 ft.; Dense 5,860 ft.; 39,400,000 ft. gas at 5,993 ft.; T.D.; fishing for tools.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. sec. 16-7-3w.
Drlg. 6,867 ft.

McIntosh County

Indian Ty. Ill. Oil Co.'s No. 1 Tancred. 1,050 ft. S and 390 ft. E of C. Sec. 9-9-14
Gilcrease sand, 2,695-2,732 ft.; 20,000,000 ft. of gas; T.D. 3,018 ft.; set 8-in. pipe at 3,225 ft.; drlg. 3,229 ft.

Oklahoma Oil Corp. No. 1-A Wolf, SE SW SE sec. 35-12-17.
Drlg. 600 ft.

Murray County

Hornsby & Jones' No. 1 Sadler, NE NE NW sec. 20-1-2.
T.D. 1,630 ft.; S.D.

Okfuskee County

Manahan & Grisso No. 1 Dalton, SE SE SE sec. 36-10-8.
Drlg. 1,210 ft.

W. J. Sherry et al No. 1 Washington, SW SW NE sec. 21-13-7.
P.B. 4,130 ft.; acidized; gas estimated 50,000 ft.; re-acidized; gas 4,500,000 ft.; 1,400 lbs. rock pressure.

Oklahoma County

Sinclair Prairie Oil Co. et al No. 1 Heavey, NE NE NW Sec. 19-12-3w.
Oswego lime 6,230 ft.; Viola 6,535 ft.; Dense 6,675 ft.; drlg. 6,726 ft.

Sinclair Prairie O. & G. Co. No. 1 Corbett, NE NW NE sec. 17-13-3w.
Oswego lime 6,070 ft.; Viola lime 6,395 ft.; T.D. 6,435 ft.; waiting on cmt.

Payne County

Deep Rock Oil Corp. No. 1 Ryan Est., NE SW SW sec. 24-18-5.
Prue formation 2,952-90 ft.; 9,000,000 ft. of gas; may deepen a few feet.

Pittsburg County

Vaughn Prod. Co. et al No. 1 Chunn, 990 ft. N and 614 ft. W of C sec. 29-4-14.
S.D. 1,170 ft.; recovered all but two joints of drill pipe.

Pontotoc County

Gulf Oil Corp. No. 1 Emry, SW SW NE sec. 15-2-6.
Hunton 5,552 ft.; Slyvan 5,846 ft.; drlg. 5,922 ft.

Mid-Texas Pet. Co. No. 1 Harbert, SW SW SE sec. 30-5-4.
Spudded and S.D.

Pioneer O. & G. Co. No. 1 Bayne, SE SW SW sec. 16-5-6.
(Old well deepening); T.D. 3,016 ft.; P.B. to 2,006 ft.; acidized and no results; P.B. to 2,760 ft.; 1,600 ft. of oil in hole; pumped 7 bbls. oil in 24 hrs.

Pottawatomie County

Ark Oil Co. No. 1 Sparkman, SE SE NE sec. 32-8-4.
Hunton lime 3,850 ft.; T.D. 4,137 ft.; acidized; flowed 1,268 bbls. of oil in 48 hrs.

Magnolia Petroleum Corp. No. 1 Devault, SW NW SE sec. 22-6-4.
Drlg. 3,290 ft.

Ross Oil Co. et al No. 1 Sparkman, SE NE sec. 33-8n-4e.
C.O. 3,915 ft.; shot at 3,871-90 ft.; swbd. 250 bbls. in 24 hrs.; acidized.

Roger Mills County

Anderson & Kerr et al No. 1 Teeter, C SE SE Sec. 2-17-25w.
Lost circulation 6,450 ft.; T.D.

Seminole County

Amerada Pet. Corp. et al No. 1 Conner, NE NE SW sec. 3-10-5.
Digging cellar.

Sinclair Prairie Oil Co. et al No. 1 Harrison, NE NE NW Sec. 17-8-8.
Location.

Felmlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8.
Sand 1,460-1,505 ft.; showing oil and gas; S.D. 1,617 ft.

Washita County

L. P. McWhirter's No. 1 fee, SW cor. Sec. 34-8n-19w.
T.D. 1,347 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

Vierson et al's No. 1 Williams, NE SW NW Sec. 34-2s-10.
Produced 2,500,000 ft. of gas from 3,746-48 ft.; now dead; T.D. 3,750 ft.; S.D. for 6-in. csg.

Bryan County

H. B. Smith et al's No. 1 Henry, C NW NE Sec. 10-8s-7e.
Rig.

Carter County

Carter Oil Co.'s No. 1 Carter-Williams. SW NE SW Sec. 27-2s-3w.
T.D 3,083 ft., flowed 10,000 bbls. of oil in 24 hrs.; pipe stuck; drlg. 7,145 ft. in new hole.

Schermerhorn Oil Co. No. 1 Clowdus, NW NW NE sec. 2-4s-2w.
T.D. 905 ft.; S.D. for repairs.

Southern States Oil Dev. Co. No. 1 Moore, NE SE NW sec. 30-4s-1w.
Drlg. 473 ft.

Texas Co. No. 1 Cathey, SE NE NE sec. 6-5s-1w.
Set 8⅝-in. pipe at 4,093 ft.; T.D. 4,155 ft.; bailed and swbd. est. 25 bbls. oil; 600 ft. oil rose in hole.

Cotton County

Grace & Woods No. 1 Henderson, NE SE SW sec. 27-4s-11w.
Drlg. 1,383 ft.

Jackson County

Associated Oil Co. No. 1 Harrell, NE NE SE sec. 13-1s-21w.
S.D. 1,360 ft.

A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w.
Drlg. 1,540 ft. in shale.

Universal Oil Co. No. 1 R. W. Briscoe, NW SW NE sec. 36-1s-20w.
Drlg. 1,247 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-3s-7w.
Show oil and gas 1,150-55 ft.; T.D. 1,300 ft.; S.D.

L. C. Heydrick No. 1 O. W. Seay, SE NW NW Sec. 31-2s-5w.
T.D. 1,727 ft.; S.D.

Geo. Pace No. 1 Gardner, SW cor. Sec. 23-2s-5w.
T.D. 600 ft.; S.D.

Sinclair Prairie Oil Co. No. 1 M. H. Barrett, NW cor. sec. 31-2s-6w.
Sand 1,805 ft.; drlg. 1,823 ft.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e.
Arbuckle lime 1,552 ft.; drlg. 1,938 ft. in lime.

Moore & Wirick No. 1 Westheimer & Daube, SE NW NE sec. 19-3s-4e.
T.D. 1,925 ft.; S.D. for orders.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3n-22.
T.D. 1,155 ft.; setting 12-in. csg.

Love County

Amerada Pet. Corp.'s No. 1-A Westheimer & Daube, SW SE SW Sec. 27-6s-2e
Drlg. 5,360 ft. in green shale and Dolomite.

J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-8s-2e.
T.D. 100 ft.; W.O.C.

Sinclair Prairie Oil Co.'s No. 1 Stockton SE SE SW Sec. 26-6s-2w.
Drill pipe stuck at 6,822 ft.; T.D. 7,165 ft.; drlg. in new hole at 6,210 ft.

Marshall County

Elmir-Gill No. 1 Lidecker, SE SE NW sec. 7-8s-6e.
T.D. 432 ft.; S.D.

Norman Smith No. 1 Chestnut, NE cor. sec. 23-8s-5e.
T.D. 300 ft.; S.D.

W. T. Singley et al No. 1 Halford, SW SE SW SW sec. 10-7s-4e.
T.D. 400 ft.; S.D.

W. T. Singley No. 1 Vickers, NW SW NW sec. 22-7s-4.
T.D. 245 ft.; S.D.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-2s-18e.
S.D. 2,560 ft.

Stephens County

Franklin & Duncan No. 1 Woolsey, NW NW SE Sec. 10-3s-6w (old well deepening).
T.D. 1,050 ft.; shut down.

Clyde Rhodes et al No. 1-A Doak, SW SW SW sec. 1-1s-5w.
T.D. 400 ft.; S.D.

Nash et al No. 1 Saddler, SW cor. NW NW SE Sec. 30-2n-4w.
T.D. 180 ft.; waiting for csg.

Tillman County

Gulf Oil Corp. No. 1 Schenck, SE NW SE Sec. 31-1s-18w.
T.D. 2,970 ft. in lime; R.U. rotary.

LA.-ARK. WILDCATS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

Bienville Parish

DeSoto O. & G. Co. No. 1 C. R. Mower, 270 ft. S, 400 ft. W, NE cor. NW SW sec. 9-16-10.
Coring 1,075 ft.

Gulf Ref. Co. No. 1 Thrasher, 723 ft. N, 554 ft. E, SW cor. sec. 13-15-7.
Rigging up.

Lide & Greer No. 1 Davis Bros. Lbr. Co., 660 ft. S and W, NE cor. SE sec. 12-16-5w.
Drlg. 2,090 ft.

Texas Seaboard Oil Co. No. 1 F. E. McGee, 660 ft. N and E center sec. 3-16-6w.
Drlg. 4,620 ft.

Bossier Parish

Bossier O. & G. Co. No. 3 Sherrill, 330 ft. N and W, SE cor. sec. 13-19-12.
S.D. 2,310 ft.

Geo. H. Bringhurst et al No. 1 Buckley, NE SW sec. 26-21-13.
Drlg. 1,755 ft.

Producers O. & G. Co. No. 1 Edwards, 660 ft. N and W, SE cor. sec. 27-18-11.
S.D. 1,160 ft.

Triangle Drlg. Co. No. 2 Skannal, Unit 56, S and W of C of NE.
Sidetracking junk 2,714 ft.

Caddo Parish

J. Ed Bailey, tr., No. 1 Hartzo, NW cor. NE NW sec. 28-22-16.
S.D. 2,136 ft.

Bayou State Oil Corp. No. 2 Brown, 150 ft. N and E, SW cor. NE SE sec. 23-22-15.
Set 10-in. 40 ft.; set 6-in. 926 ft.

Max Brandt No. 1 Hughes, SW cor. NE NW sec. 15-20-15.
Tested 500,000 ft. gas; S.D.; W.O. 2,206 ft.

Pyramid O. & G. Co. No. 1-A S. R. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16.
Rigging up.

Shreveport Oil Corp. No. 8-B Muslow, 1,760 ft. E, 330 ft. N, SW cor. NW sec. 4-20-15.
S.D. 1,200 ft.

De Soto Parish

S. S. Alexander No. 1 G. R. Stell, 330 ft. S and W, NE cor. sec. 5-12-16.
Arranging set csg. 4,809 ft.

E. B. Bird et al No. 1 J. H. Johns, 330 ft. N and W, C sec. 20-14-6.
Tested S.W. 2,622 ft., S.D.W.O.

Clarke & Stiller No. 1 Logan Oil Co., sec. 17-10-12.
Tested 5,000,000 ft. of gas 3,280 ft.

A. G. Halbach et al No. 1 Staton, 150 ft. N and E, SW cor. SE sec. 29-13-14.
Drlg. 3,150 ft.

Union Pet. Co. No. 1 Hill, sec. 3-10-13.
S.D. 1,400 ft.

J. L. Ryan et al No. 1 Jackson, 330 ft. N and E, SW cor. sec. 1-11-14.
S.D. 65 ft.

Grant Parish

Alexander et al No. 1 Maxwell, sec. 9-9-1e.
W.O.S.R. 1,538 ft.

Jackson Parish

Geo. W. Zeigan No. 3 La. Central Lbr. Co., sec. 26-14-1w.
Dry and abd. 1,764 ft.

La Salle Parish

H. L. Hunt, Inc., No. 1 La.-Central Lbr. Co., 2,182 ft. E, 660 ft. N, SW cor. sec. 33-10-3e.
Set 10-in. 100 ft.; drlg. 256 ft.

Lincoln Parish

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w.
Rigging up.

Herman L. Brown et al No. 1 S. Gardner, 230 ft. N, 330 ft. E, SW cor. NW NE sec. 10-17-4w.
Drlg. 1,930 ft.

Natchitoches Parish

Ab Jones No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. sec. 5-10-10.
S.D. 1,033 ft.

Union Pet. Co. No. 1 DeBlieux, 1,395 ft. E, 150 ft. S, NW cor. sec. 32-10-7.
S.D. 2,850 ft.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e.
Set 10-in. 176 ft.

Arthur Wray No. 1 Slocum, 2,436 ft. S, 560 ft. W, NE cor. sec. 10-17-6e.
S.D. 600 ft.

Sabine Parish

B. S. & M. Oil Co. No. 1 Tatum, 330 ft. S and E, NW cor. NW SE sec. 32-8-18.
P.B. to 1,590 ft. from 2,100 ft.

W. E. Hall No. 1 Edwards, 230 ft. S and 330 ft. W of NE corner NW SE sec. 29-9-13.
W.O.S.R. 2,090 ft.

J. E. Nicholson No. 1 Cassell, 330 ft. S and W, NE cor. NW SW sec. 25-9-14.
S.D. 1,585 ft.

Geo. L. Pace No. 4 DeSoto Corp., 330 ft. S and W NE cor. SE SE sec. 27-10-13.
S.D. 1,895 ft.

Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13.
S.D. 750 ft.

Lee Whitehurst No. 1 Cassell, 440 ft. S and W, NE cor. NW sec. 30-9-13.
Set 10-in. 40 ft.; drlg. 200 ft.

Union Parish

Interstate Nat. Gas Co. No. 43 fee, 980 ft. S and W, NE cor. sec. 2-20-3e.
Set 6-in. 2,092 ft.

Southern Carbon Co. No. 7 Grayling, 1,980 ft. S, 1,986 ft. W, NE cor. sec. 29-21-4e.
Set 6-in. 2,057 ft.

Webster Parish

J. L. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 8-17-9.
Drlg. shale 1,290 ft.

Ohio Oil Co. No. 1 R. L. Holloway, 660 ft. S, 760 ft. W, C Sec. 23-21-10.
Drlg. 5,200 ft.

Winn Parish

Parsons et al No. 1 Tremont Lbr. Co., 660 ft. S, 330 ft. E, NW cor. SW sec. 10-12-2w.
Drlg. 2,635 ft.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co.'s No. 1 J. B. Rodgers, 330 ft. N, 430 ft. W, SE cor. of 160-ac. tract in C. M. Robinson Sur.
Comp.; 3,000,000 ft. of gas 5,830 ft.

R. W. Norton No. 1 Mary Riner, John Collum Sur.
Reaming 5,839 ft.

United Gas Pub. Ser. Co. No. 2 J. R. Jones Unit, Ben Murray Sur.
Set 16-in. 328 ft.

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D. Spain Sur.
P.B. to 3,524 ft.

Marion County

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
P.B. to 2,443 ft.

Panola County

George Hudson et al's No. 1 J. F. Nail, C. McGeary Sur.
Set 8-in. 40 ft.; fishing for core bbl. at 2,345 ft.

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Geo. Le Grand No. 1 P. J. Wardleigh, A. Thompson Sur.
Set 10-in. 62 ft.

ARKANSAS

Arkansas County

Ark. O. & G. Co. No. 3 Fischer, 250 ft. S, 200 ft. E, NW cor. NE NW sec. 6-6-4w.
Rigging up.

Clark County

Boris Tripanoff, tr., No. 1 W. Gibbons, sec. 27-8-18.
Arranging to test 557 ft.

Hempstead County

Dixie Drlg. Co. No. 1 Wheatley, 330 ft. S. 30 ft. E, NW cor. SW NE sec. 14-11-26.
Moving in rig.

Fitzwater et al No. 2 Lafferty, C NW sec. 17-14-24.
S.D. 1,986 ft.

G. L. Glass, tr., No. 1 May B. O'Bier, sec. 32-12-23.
Derrick.

Murdock-May & Easton No. 1 Conway est., 330 ft. N and E, SW cor. NW SW sec. 17-14-24.
Set 12⅛-in. 80 ft.; S.D. 120 ft.

LaFayette County

Earl F. Fox No. 2 Coleman Bros., NE NE sec. 30-16-24.
T.A. 2,824 ft.

Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13.
S.D. 2,790 ft.

Kamon & Neely No. 1 Cockran, NW cor. SE SW sec. 26-19-25.
S.D. 4,450 ft.

Joe Modisett No. 1 Red River Lbr. Co., C SW SW sec. 21-19-14.
S.D. 2,662 ft.

Transportation Pet. Co. No. 1 Cockran, 330 ft. S and W, NE cor. SE sec. 26-19-25.
S.D. 3,412 ft.

Miller County

King Oil Corp. No. 1 G. W. Crank, SW NE sec. 19-16-25.
S.D.; W.O. 3,906 ft. (corrected).

M. H. S. Oil Co. No. 2 Beck, sec. 34-15-26.
Comp.; pumping 60 bbls., 2,928 ft.

L. H. Mahon et al No. 1 Miller Land & Timber Co., SW cor. SE sec. 29-18-27.
S.D. 1,801 ft.

Ouachita County

Grigsby & Aarner No. 1 Burris, 330 ft. N and E, SW cor. NW NE sec. 19-1s-19.
S.D.; W.O. 3,050 ft.

L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15.
S.D. 1,700 ft.

Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. N and W, SE cor. SE NW sec. 27-15-15.
Reaming to bottom 1,668 ft.

J. D. Reynolds No. 1 McKenzie, 204 ft. S, 300 ft. W, NE cor. SE SW sec. 36-15-16.
Set 10-in. 100 ft.

W. B. Street, trustee No. 1 Roth & Cartier, 330 ft. N and E, SW cor. SW NE.
Tested; show oil; drlg. deeper 1,404 ft.

Poinsett County

Rockwell Dev. Co. No. 2 W. A. Smith, 52 ft. S, 190 ft. E of C NE NE sec. 13-11n-3e.
Drlg. 1,840 ft.

Sevier County

Pendleton & Vaughn No. 1 Dierke, C NW NE sec. 14-20-29.
Drlg. 715 ft.

Union County

Arkansas Southern Oil Co. No. 1 F. R. Laney, sec. 30-19-16.
Installing larger rig. 175 ft.

J. C. Buckbee, tr. No. 1 Sloan, 330 ft. N and E, SW cor. SE NW.
W.O.S.R. 2,160 ft.

J. C. Buckbee No. 2 Sloan, 330 ft. S and E, NW cor. SE NW sec. 14-17-15.
Set 10-in. 151 ft.

J. E. Crosbie, Inc., No. 4 Sullivant, 300 ft. N, 360 ft. W, SE cor. NE NW sec. 12-17-14.
Set 7-in. 3,165 ft.; T.D. 3,173 ft.

F. C. Henderson No. 1 J. M. Sheppard, C NE NW sec. 35-17-15.
Set 6-in. 2,115 ft.; T.D. 2,192 ft.

Mrs. R. K. Jones et al No. 1 Davis, 330 ft. N and W, SE cor. NW NW sec. 35-16-14.
Arranging to test 3,297 ft.

Ohio Oil Co. No. 6 R. Pumphrey, 520 ft. S, 50 ft. W, NE cor. SE NW sec. 12-17-14.
Set 10-in. 179 ft.

Root Ref. Co. and G. W. James No. 1 Sullivant, sec. 12-17-14.
S.W. and abd. 3,305 ft.

LA.-ARK. PROVEN
NORTH LOUISIANA

Caddo—Rodessa

Ark.-La. Gas Co. No. 7 Rodessa Oil & Land Co., 330 ft. S and W, NE cor. NW NE sec. 23-23-16.
Set 7-in. 6,000 ft.

Ark.-La. Gas Co. No. 8 Rodessa O. & Land Co., 330 ft. S and E., NW cor. SE NE sec. 22-23-16.
Cmtd. back 2,073 ft.; T.D. 3,323 ft.

Ark.-La. Gas Co. No. 9 Rodessa O. & Land Co., 330 ft. S, 520 ft. W, NE cor. SE SE sec. 13-23-16.
Drlg. 2,513 ft.

Ark.-La. Gas Co. No. 10 Rodessa O. & Land Co., 330 ft. S and W, NE cor. SE NE sec. 23-23-16.
Rigging up.

Bartex Pipe Line Co. No. 2 Norton Est., 330 ft. N and E, SW cor. NW NW sec. 17-23-15.
Set 16-in. 260 ft.

Bartex Pipe Line Co. No. 1 Rodessa O. & Land Co., 660 ft. N and W, SE cor. NE SE sec. 13-23-16.
Drlg. 5,490 ft.

Bartex Pipe Line Co. No. 1 Robinson, C E½ NE SE sec. 13-23-15.
Set 10¾-in. 2,336 ft.

Bartex Pipe Line Co. No. 2 Robinson, center W½ NW SW sec. 17-23-15.
Drlg. 4,034 ft.

Danciger & Hall No. 1 Willis, C Lot 5, Blk. 7, sec. 23-23-16.
Drlg. 5,945 ft.

J. Edward Jones No. 1 Neugent, 25 ft. N and E, SW cor. Lot 14, Blk. 13, sec. 23-23-16.
Drlg. 4,195 ft.

Haynes Prod. Co. No. 1 Tyson, 305 ft. N, 218 ft. W, SE cor. NW NE sec. 14-23-16.
Drlg. 5,413 ft.

Haynes Prod. Co. No. 2 Tyson, 1,030 ft. S, 2,310 ft. W, NE cor. sec. 14-23-16.
Set 12½-in. 270 ft.; set 10¾-in. 2,085 ft.

Haynes Prod. Co. No. 1 Zylks, 330 ft. N and W, SE cor. sec. 9-23-16.
Coring 5,772 ft.

Haynes Prod. Co. No. 7 Lawton, 330 ft. S, 990 ft. E of NW cor. SW sec. 14-23-16.
Comp.; 200 bbls. per hr., 6,006 ft.

Haynes Prod. Co. No. 8 Lawton, 333 ft. S, 337 ft. W, NE cor. SW NW sec. 14-23-16.
Drlg. 4,860 ft.

Haynes Prod. Co. No. 1-B Mattie Pitts, 330 ft. N and E, SW cor. NW SE sec. 12-23-16.
Drlg. 4,085 ft.

Haynes Prod. Co. No. 3 Caldwell, 330 ft. N and E, SW cor. sec. 12-23-16.
Testing 6,044 ft.

Lion Oil Ref. Co. No. 1 J. M. Wynn, 1,900 ft. N, 660 ft. E, SW cor. sec. 9-23-15.
Coring 6,092 ft.

M. H. Marr No. 2 Hunter, 990 ft. S and 330 ft. E, NW cor. SW sec. 13-23-16.
Drlg. 5,944 ft.

M. H. Marr No. 4 Hunter, 330 ft. S, 1,316 ft. E, NW cor. SW sec. 13-23-16.
Drlg. 3,007 ft.

R. W. Norton No. 1 Spearman Unit, 1,980 ft. N, 1,155 ft. W, SE cor. sec. 18-23-15.
Drlg. 4,795 ft.

R. W. Norton No. 1 Atkins, 330 ft. N and W, SE cor. NE NE sec. 18-23-15.
Drlg. 2,814 ft.

R. W. Norton No. 3 Tyson heirs, 330 ft. N and E, SW cor. SE NW sec. 13-23-16.
Set 9⅝-in. csg. 2,112 ft.; drlg. 2,367 ft.

O'Brien Bros. No. 2 Rodessa Oil & Land Co., 330 ft. S and E of NW cor. W½ NW SW sec. 14-23-16.
Set 7-in. csg. 5,980 ft.; T.D. 6,005 ft.

Pelican O. & G. Co. No. 9 Sexton, 330 ft. N and W, SE cor. NE SE sec. 14-23-16.
Drlg. 5,720 ft.

Pelican O. & Gasoline Co. No. 11 Sexton, 330 ft. S and W, NE cor. SE SE sec. 14-23-16.
Drlg. 5,076 ft.

Pelican O. & G. Co. No. 12 Sexton, 330 ft. N and E, SW cor. SE SE sec. 14-23-16.
Coring 5,998 ft.

Pelican O. & Gasoline Co. No. 13 Sexton, 330 ft. N and W, SE cor. sec. 14-23-16.
Drlg. 3,938 ft.

Pelican Oil & Gasoline Co. No. 10 Sexton, 330 ft. S and E, NW cor. SE SE sec. 14-23-16.
Fishing for D.S. 5,726 ft.

United Gas Public Service Co. No. 3 Ardis & Co., 990 ft. N, 1,650 ft. W, SE corner sec. 14-23-16.
Drlg. 5,848 ft.

United Gas Pub. Ser. Co. No. 4 Ardis & Co., 330 ft. N, 1,650 ft. SE cor. sec. 14-23-16.
Drlg. 5,462 ft.

United Gas Pub. Ser. Co. No. 5 Bremer Unit, 620 ft. N, 148 ft. W, C sec. 22-23-16.
Drlg. 2,350 ft.

United Gas Pub. Ser. Co. No. 2 Brewer Unit, 657 ft. S, 578 ft. E, NW cor. sec. 23-23-16.
Rigging up.

United Gas Pub. Ser. Co. No. 1 Harris, 332 ft. S, 1,123 ft. W, NE cor. sec. 15-23-16.
Drlg. 4,056 ft.

United Gas Pub. Ser. Co. No. 2 V. I. Miller, 330 ft. S, 990 ft. E, NW cor. sec. 14-23-16.
Set 10¾-in. 2,199 ft.; drlg. 3,507 ft.

United Gas Pub. Ser. Co. No. 1 M. L. Pitts, 990 ft. N, 338 ft. E, SW cor. sec. 13-23-16.
Rigging up.

United Gas Pub. Ser. Co. No. 1 N. S. Spearman unit, sec. 18-23-15.
Set 10¾-in. 2,195 ft.; drlg. 2,795 ft.

United Gas Public Service Co. No. 2 Spearman, 427 ft. S, 660 ft. E, NW corner sec. 22-23-16.
Drlg. 5,906 ft.

United Gas Public Service Co. No. 1 Tyson Unit, 990 ft. S, 1,054 ft. W, NE cor. sec. 14-23-16.
Comp.; 47 bbls. per hr., 6,020 ft.

United Gas Public Service Co. No. 2 Tyson Unit, 920 ft. S, 330 ft. W, NE cor. sec. 14-23-16.
Comp.; 44 bbls. per hr., 6,025 ft.

United Gas Public Service Co. No. 3 Tyson Unit, 1,720 ft. S, 356 ft. E, NW cor. sec. 13-23-16.
Set 7-in. 5,974 ft.; T.D. 6,025 ft.

United Gas Public Service Co. No. 4 Tyson Unit, sec. 13-23-16.
Comp.; 55 bbls. per hr., 6,025 ft.

United Gas Public Service Co. No. 5 Tyson Unit, 660 ft. S and E, NW cor. sec. 13-23-16.
Drlg. 4,721 ft.

United Gas Pub. Ser. Co. No. 6 Tyson Unit, 306 ft. S, 318 ft. E, NW cor. sec. 13-23-16.
Set 16-in. 329 ft.

United Gas Pub. Ser. Co. No. 7 Tyson Unit, 345 ft. N, 336 ft. W, SE cor. sec. 11-23-16.
Set 10¾-in. 2,314 ft.; drlg. 2,530 ft.

United Gas Pub. Ser. Co. No. 7 Rodessa Oil & Land Co., 231 ft. N, 330 ft. W, SE cor. sec. 15-23-16.
Drlg. 2,141 ft.

United Gas Pub. Ser. Co. No. 8 Rodessa O. & Land Co., 1,020 ft. S, 1,062 ft. W, NE cor. sec. 22-23-16.
Drlg. 4,522 ft.

United Gas Pub. Ser. Co. No. 9 Rodessa O. & Land Co., 1,091 ft. S, 371 ft. W, NE cor. sec. 22-23-16.
Drlg. 4,298 ft.

United Gas Pub. Ser. Co. No. 10 Rodessa O. & Land Co., 2,348 ft. S, 1,690 ft. W, NE cor. sec. 22-23-16.
Drlg. 5,117 ft.

United Gas Pub. Ser. Co. No. 2 I. L. Young, 1,944 ft. N, 605 ft. W, SE cor. sec. 21-23-16.
Rigging up.

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
General Petroleum, No. 15 Capitan, Santa Barbara Co.	32- 5-30	2,421	cmtd. 2,320
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	5,597	rd. sh. drlg.
Barnsdall-Rio Grande, No. 12 Elwood, Santa Barbara	15- 4-29	7,157	swab. wet
Barnsdall-Rio Grande, No. 16 Elwood, Santa Barbara	15- 4-29	3,881	suspended
Barnsdall-Rio Grande, No. 88-7 Elwood, Santa Barbara	tideland	3,619	will test
Barnsdall-Rio Grande, No. 2 Elwood, Santa Barbara.	15- 4-29	6,492	suspended
Bankline Oil Co., No. 7 Elwood, Santa Barbara Co. ...	tideland	3,424	will deepen
Bankline Oil Co., No. 10 Elwood, Santa Barbara Co. ..	tideland	4,797	suspended
Signal Oil Co., No. 7 Elwood, Santa Barbara Co. ...	tideland	701	sd. sh. drlg.
Spalding, Caroline, No. 7 Elwood, Santa Barbara Co..	tideland	3,618	P.B. 3,410
Barnsdall Oil Co., No. 1 Coal Oil Point, Santa Barbara	tideland	5,510	will deepen
Dietzman, Julius, No. 1 Carpinteria, Santa Barbara	8- 4-25	350	sd. sh. drlg.
Union Oil Co., No. 1 Sudden, Santa Barbara Co.	Not sur.	....	bldg. rig
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	599	sd. sh. drlg.
Union Oil Co., No. 1 Bardsdale, Ventura Co.	12- 3-20	5,758	pump. 160 b.d.
Monticello Oil Co., No. 1 Bardsdale, Ventura Co. ...	12- 3-20	4,011	test wet
Duke Oil Co., No. 1 Bardsdale, Ventura Co.	7- 3-19	1,998	temp. susp.
Supreme Oil Co., No. 1 Sespe, Ventura Co.	1- 4-20	880	fishing
Bankline Oil Co., No. 1 Sespe, Ventura Co.	36- 5-20	1,775	cmtd. 225
Nelson & Co., No. 1 Sespe, Ventura Co.	28- 4-19	1,632	rd. sd. drlg.
Laying & Jacobs, No. 1 Shiells Canyon, Ventura Co.	32- 4-19	1,236	gr. sd. drlg.
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	1,275	sd. sh. drlg.
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co. ...	2- 3-19	....	rigging up
Bankline Oil Co., No. 2 Shiells Canyon, Ventura Co.	3- 3-19	3,674	cmtd.
The Texas Co., No. 129 Shiells Canyon, Ventura Co.	4- 3-19	1,754	sd. sh. drlg.
Hull, James, No. 1 Santa Susana, Ventura Co.	2- 2-18	1,500	repair mach.
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co.	4- 4-18	532	sd. sh. drlg.
Torrey-Ventura Oil Co., No. 1 Temescal, Ventura Co.	32- 4-18	4,029	cleaning out
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	2,296	sd. sh. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	7,073	P.B. 6,435
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	9,582	P.B. 7,119
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	....	rigging up
Honolulu Oil Corp., No. 3 Rincon, Ventura Co.	tideland	2,752	O.S. drlg.
Continental Oil Co., No. 2 Ojai, Ventura Co.	13- 4-23	1,031	cleaning out
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	15- 3-24	5,561	sd. sh. drlg.
Continental Oil Co., No. 6 San Miguelito, Ventura Co.	24- 3-24	....	bldg. rig
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	5,887	fish. D.P.
Cumberland Oil Co., No. 1 Devil's Den, Kern Co.	17-26-18	4,461	br. sh. drlg.
Belmac Drlg. Co., No. 1 McKittrick, Kern Co.	22-29-21	4,797	fish. D.P.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	761	sd. sh. drlg.
Belridge Oil Co., No. 18-35 North Belridge, Kern Co.	35-27-20	5,383	O.S. drlg.
Belridge Oil Co., No. 6-1 North Belridge, Kern Co...	1-28-28	5,355	cmtd. 5,353
Belridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	....	bldg. rig
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,400	O.S. drlg.
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	....	rigged up
Continental Oil Co., No. 7 North Belridge, Kern Co. ...	36-27-20	1,031	sd. sh. drlg.
Beck, Albert, No. 1 North Belridge, Kern Co.	35-28-20	1,661	gr. sd. drlg.
Standard Oil Co., No. 6 Delano, Kern Co.	1-25-23	4,130	cmtd. 3,216
Standard Oil Co., No. 7 Delano, Kern Co.	34-24-23	....	rigging up
Trico Oil & Gas Co., No. 1 Delano, Kern Co.	3-25-23	2,525	gas; shut in
Trico Oil & Gas Co., No. 5 Delano, Kern Co.	3-25-23	2,467	gas; shut in
Richardson & Heaston, No. 1 Kern Front, Kern Co.	5-28-28	3,100	gr. sd. drlg.
C. C. M. Oil Co., No. 13 Kern Front, Kern Co.	23-28-27	2,150	sd. sh. drlg.
C. C. M. Oil Co., No. 14 Kern Front, Kern Co.	23-28-27	....	bldg. rig
Republic Pet. Co., No. 6 Kern Front, Kern Co.	24-28-27	1,491	sd. sh. drlg.
Kreighs, C. M., No. 1 Kern Front, Kern Co.	4-28-27	2,997	P.B. 2,714
Vega Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	1,725	O.S. drlg.
The Texas Co., No. 3 Kern Front, Kern Co.	23-28-27	2,087	pump 146 b.d.
The Texas Co., No. 4 Kern Front, Kern Co.	23-28-27	2,010	cmtd. 2,009
Ohio Oil Co., No. 10 Premier, Kern Co.	32-27-27	2,929	P.B. 2,740
Recovery Oil Co., No. 1 Dominion, Kern Co.	28-26-28	....	bldg. rig
Spabeck & Gardner, No. 1 Mount Poso, Kern Co.	31-27-28	1,150	sd. sh. drlg.
Elliott Oil Co., No. 1 Fruitvale, Kern Co.	14-29-27	3,996	gr. sd. drlg.
Dixie Lee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,386	sd. sh. drlg.
The Texas Co., No. 1 Fruitvale, Kern Co.	26-29-27	....	rigging up
North American, No. 1 Mountain View, Kern Co.	5-31-29	3,898	sd. sh. drlg.
Gilmore-Snyder, No. 4 Mountain View, Kern Co.	24-30-28	5,332	P.B. 5,160
Hancock Oil Co., No. 3 Mountain View, Kern Co.	14-30-28	5,373	flow. 830 b.d.
Hancock Oil Co., No. 5 Mountain View, Kern Co.	14-30-28	5,360	redrlg. 5,130
Hogan Pet. Co., No. 3 Mountain View, Kern Co.	32-30-29	6,287	fish. bailer
Hogan Pet. Co., No. 9 Mountain View, Kern Co.	5-31-29	3,654	sd. sh. drlg.
Hogan Pet. Co., No. 10 Mountain View, Kern Co.	29-30-29	1,520	sd. sh. drlg.
Buffalo Oil Co., No. 1 Mountain View, Kern Co.	19-30-29	4,977	sd. sh. drlg.
Sheldon Oil Corp., No. 1 Mountain View, Kern Co.	19-30-29	4,966	cmtd. 4,965
Vesta Pet. Co., No. 2 Mountain View, Kern Co.	19-30-29	5,162	flow. 358 b.d.
Wood-Callahan Oil Co., No. 2 Mountain View, Kern Co.	25-30-28	4,786	sd. sh. drlg.
O'Kane & Brain, No. 2 Mountain View, Kern Co.	30-30-29	5,922	completing
Mohawk Oil Co., No. 16 Mountain View, Kern Co.	30-30-29	6,054	sd. sh. drlg.
Mohawk Oil Co., No. 17 Mountain View, Kern Co.	30-30-29	5,882	flow. 500 b.d.
Ohio Oil Co., No. 2 Mountain View, Kern Co.	33-30-29	5,808	shut in
Ohio Oil Co., No. 3 Mountain View, Kern Co.	33-30-29	4,120	sd. sh. drlg.
Shell Oil Co., No. 5 Mountain View, Kern Co.	32-30-29	6,063	flow. 631 b.d.
Shell Oil Co., No. 6 Mountain View, Kern Co.	32-30-29	5,797	cleaning out
Shell Oil Co., No. 7 Mountain View, Kern Co.	32-30-29	2,946	sd. sh. drlg.
Shell Oil Co., No. 8 Mountain View, Kern Co.	32-30-29	....	rig; suspended
Standard Oil Co., No. 21 Mountain View, Kern Co.	24-30-28	5,140	flow. 670 b.d.
Standard Oil Co., No. 22 Mountain View, Kern Co.	24-30-28	5,170	flow. 1,026 b.d.
Standard Oil Co., No. 23 Mountain View, Kern Co.	13-30-28	4,582	sd. sh. drlg.
Standard Oil Co., No. 24 Mountain View, Kern Co.	13-30-28	3,974	sd. sh. drlg.
Standard Oil Co., No. 25 Mountain View, Kern Co.	13-30-28	3,648	sd. sh. drlg.
Mountain View Oil Co. No. 1 Mountain View, Kern Co.	25-30-28	5,814	rig to pump
Jergins Trust, No. 5 Mountain View, Kern Co.	24-30-28	5,960	swab. 350 b.d.
Speik Oil Co., No. 1 Bakersfield, Kern Co.	25-30-27	6,121	dry; abd.
Shell Oil Co., No. 1 Stevens, Kern Co.	29-30-26	2,322	sd. sh. drlg.
Shell Oil Co., No. 10 Round Mountain, Kern Co.	17-28-29	1,920	cmtd. 1,905
California Western Oil, No. 5 Round Mountain, Kern	7-28-29	1,531	pump. 300 b.d.
California Western Oil, No. 6 Round Mountain, Kern	7-28-29	....	rigging up
Barnsdall Oil Co., No. 1 Round Mountain, Kern Co. ...	7-28-29	1,642	rig to pump
Barnsdall Oil Co., No. 2 Round Mountain, Kern Co. ...	7-28-29	....	bldg. rig
Mountain Pet. Co., No. 1 Round Mountain, Kern Co.	24-28-28	....	rigged up
Berry Oil Co., No. 2 Edison, Kern Co.	10-30-29	1,950	sd. sh. drlg.
Jergins Trust, No. 17 Edison, Kern Co.	14-30-29	1,550	pump. 396 b.d.
Jergins Trust, No. 18 Edison, Kern Co.	24-30-29	1,385	sd. sh. drlg.
Jergins Trust, No. 19 Edison, Kern Co.	24-30-29	1,348	P.B. 1,225
Rogers & Osborne, No. 1 Edison, Kern Co.	19-30-30	1,447	P.B. 1,077
General Pet., No. 13 Edison, Kern Co.	24-30-29	1,576	recmtd. 1,290
General Pet., No. 14 Edison, Kern Co.	24-30-29	....	bldg. rig
Union Oil Co., No. 3 Edison, Kern Co.	14-30-29	2,488	sd. sh. drlg.
Union Oil Co., No. 4 Edison, Kern Co.	14-30-29	....	rig; suspended
Union Oil Co., No. 5 Edison, Kern Co.	13-30-29	....	rig; suspended
General Pet. Corp., No. 1 Elk Hills, Kern Co.	5-30-24	5,365	cleaning out
Gibson Oil Co., No. 2 Maricopa, Kern Co.	6-11-23	1,000	sd. sh. drlg.
Quality Oil Co., No. 1 Midway, Kern Co.	27-32-23	1,545	pump. 70 b.d.
Evans, H. B., No. 12 Midway, Kern Co.	35-32-23	996	sd. sh. drlg.
Ohio Oil Co., No. 4 Buena Vista, Kern Co.	32-31-26	4,221	gas; shut in
Ohio Oil Co., No. 5 Buena Vista, Kern Co.	31-31-26	4,107	form. test
Silver Gate Oil & Gas Co., No. 1 Tejon, Kern Co.	7-10-19	3,005	cmtd. 1,870
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	2-10-19	....	rig; suspended

Milham Expl. Co., No. 2 Huron, Fresno Co.	13-20-18	3,501	dry; abd.
Milham Expl. Co., No. 3 Huron, Fresno Co.	30-16-14	....	bldg. rig
Conlon, J. M., No. 1 Coalinga, Fresno Co.	30-19-15	150	sd. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,760
K. N. D. A., No. 54 Kettleman North, Fresno Co.	24-21-16	3,730	hd. sd. drlg.
Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	29-23-19	7,760	cleaning out
Petroleum Securities, No. 2 Kettleman Middle, Kings	30-23-19	9,332	resume work
Royalty Service Corp., No. 1 Pyramid Hills, Kings Co.	16-24-18	2,006	P.B. 1,986
Birch-Hoyer Oil Co., No. 1 Pismo, San Luis Obispo Co.	32-31-12	1,546	sd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,687	cleaning out
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	1,252	hd. sh. drlg.
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings	21-22-20	2,490	gas; shut in
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,481	sd. sh. drlg.
Union-Hancock, No. 1 Tulare Lake, Kings Co.	28-22-20	2,680	br. sh. drlg.
Amerada Pet., No. 5 F.L.D., San Joaquin Co.	15- 2-5	4,029	producing gas
Amerada Pet., No. 6 F.L.D., San Joaquin Co.	15- 2-5	4,020	cmtd. 3,972
Pure Oil Co., No. 2 Chowchilla, Madera Co.	8-10-14	2,610	will P.B.
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	6,100	sd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	7,353	sd. sh. drlg.
Kabelia Oil Co., No. 2 Ducor, Tulare Co.	12-23-27	890	hd. sd. drlg.
Kenwood Pet. Corp., No. 1 Ducor, Tulare Co.	14-24-27	857	hd. sd. drlg.
Murrell, T. R., No. 1 Los Banos, Merced Co.	8-10-9	1,343	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 2 El Segundo, Los Angeles Co.	18- 3-14	2,512	sd. sh. drlg.
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	6,359	rebldg. rig
Sovereign Oil Co., No. 1 El Segundo, Los Angeles Co.	32- 3-14	8,766	P.B. 4,890
Cone Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	752	sd. sh. drlg.
Pan-Tex Oil Co., No. 1 Lawndale, Los Angeles Co.	20- 3-14	6,480	will redrill
Pioneer Holding Co., No. 1 Moneta, Los Angeles Co.	32- 3-14	4,320	suspended
McDowell, O. B., No. 1 Torrance, Los Angeles Co.	35- 3-14	4,625	suspended
White Five Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	rigged up
Dumas-Lewis Oil Co., No. 1 Redondo, Los Angeles Co.	6- 4-14	2,552	sd. sh. drlg.
B. & N. Oil Co., No. 1 Redondo, Los Angeles Co.	18- 4-14	....	bldg. rig
Clark, T. R., No. 1 Redondo, Los Angeles Co.	6- 4-14	2,552	cleaning out
West American Oil Co., No. 1 Dominguez, Los Angeles	3- 4-13	5,400	sd. sh. drlg.
McAdams Expl. Co., No. 1 Palos Verdes, Los Angeles	31- 4-13	4,496	dry; abd.
Shell Oil Co., No. 1 Long Beach, Los Angeles Co.	13- 4-13	5,461	sd. sh. drlg.
Continental Oil Co., No. 38 Seal Beach, Los Angeles	3- 5-12	1,363	sd. sh. drlg.
Vanco Oil Co., No. 1 Artesia, Los Angeles Co.	25- 3-13	5,888	cmtd. 4,925
Clayton, C. L., No. 1 Long Beach, Los Angeles Co.	31- 3-12	6,765	suspended
Standard Oil Co., No. 15 Inglewood Deep, Los Angeles	8- 3-14	4,020	flow. 2,704 b.d.
Ohio Oil Co., No. 18 Del Rey, Los Angeles Co.	32- 3-15	2,971	sd. sh. drlg.
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	23- 3-15	2,670	sd. sh. drlg.
Fourl, C. W., No. 5 Del Rey, Los Angeles Co.	27- 3-15	....	bldg. rig
Angle American Oil Co., No. 1 Del Rey, Los Angeles	27- 3-15	6,939	C.P. 6,750
Herndon Dev. Co., No. 1 Del Rey, Los Angeles Co.	27- 3-15	4,387	sd. sh. drlg.
Union Oil Co., No. 19 Del Rey, Los Angeles Co.	27- 3-15	6,207	flow. 865 b.d.
Union Oil Co., No. 20 Del Rey, Los Angeles Co.	27- 3-15	4,152	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	1,397	hd. sh. drlg.
Yant Pet. Corp., No. 2 Newhall, Los Angeles Co.	36- 4-16	....	bldg. rig
Eyer Pet. Co., No. 1 Compton, Los Angeles Co.	20- 4-13	3,100	suspended
Monarch Oil Corp., No. 1 Topanga, Los Angeles Co.	5- 1-16	652	cmtd. 625
Standard Oil Co., No. 79 Montebello, Los Angeles Co.	2- 2-12	4,290	form. test
Standard Oil Co., No. 80 Montebello, Los Angeles Co.	2- 2-12	2,793	sd. sh. drlg.
Standard Oil Co., No. 81 Montebello, Los Angeles Co.	2- 2-12	2,543	will redrill
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	5,661	sd. sh. drlg.
Standard Oil Co., No. 83 Montebello, Los Angeles Co.	2- 2-12	....	bldg. rig
Standard Oil Co., No. 84 Montebello, Los Angeles Co.	2- 2-12	....	bldg. rig
Butler, C. R., No. 1 Montebello, Los Angeles Co.	14- 2-10	2,175	sd. sh. drlg.
Woodward Oil Co., No. 2 Montebello, Los Angeles Co.	4- 2-11	3,336	suspended
The Texas Co., No. 13 Montebello, Los Angeles Co.	5- 2-11	6,788	will test
Universal Consd., No. 3 Montebello, Los Angeles Co.	5- 2-11	5,951	flow. 550 b.d.
Universal Consd., No. 4 Montebello, Los Angeles Co.	5- 2-11	6,600	cleaning out
Universal Consd., No. 5 Montebello, Los Angeles Co.	5- 2-11	5,525	will test
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,353	suspended
North American, No. 1 Montebello, Los Angeles Co.	30- 1-10	5,952	suspended
North American, No. 2 Montebello, Los Angeles Co.	5- 2-11	....	bldg. rig
Frontier Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	5,246	P.B. 4,990
Oil & Gas Associates, No. 1 Pico, Los Angeles Co.	9- 2-11	3,280	hd. sd. drlg.
Fraser, N. M., No. 1 Saugus, Los Angeles Co.	31- 4-16	975	pump. water
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 6-5	2,021	hd. sd. drlg.
Albert Pet. Co., No. 1 Murrieta, Riverside Co.	23- 7-3	2,786	water witch
Stevens, F. E., No. 1 Corona, Riverside Co.	27- 3-7	....	rigging up
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	676	bl. sh. drlg.
Twentieth Century Oil Co., No. 1 Huntington, Orange	36- 5-11	5,118	cleaning out
Leaseholders Dev. Co., No. 1 Atwood, Orange Co.	26- 3-9	4,185	suspended
Standard Oil Co., No. 1 Anaheim, Orange Co.	36- 3-9	2,792	redrlg. 2,549
Continental Oil Co., No. 1 Yorba, Orange Co.	21- 3-9	2,520	sd. sh. drlg.
Equitable Pet. Co., Well No. 1, San Bernardino Co.	11-16-5	2,000	cmtd. 1,900
Tehama Pet. Co., No. 1 Chino, San Bernardino Co.	33- 2-8	3,060	P.B. 1,460

GULF COAST WILDCATS

Week Ending February 8

Raccoon Bend—Austin County

Humble O. & R. Co. No. 16-X Bellville, 260 ft. SE of NW line, 325 ft. SW of NE line of most westerly N cor. of lease, Wm. C. White Sur.
Drlg. hard sand 1,047 ft.

Humble O. & R. Co. No. 2 Granau, 150 ft. southeasterly from interior cor. in the NW boundary at R/A to most northerly NW line, thence 55 ft. SW at R/A.
T.D. 4,353 ft.; 7-in. csg. 3,186 ft.; P.B. to 3,220 ft.; rig up to pump.

Humble O. & R. Co. No. 2-B Bracy, 375 ft. NE of SW line and 250 ft. SE of NW line, Wm. C. White Sur.
T.D. 3,335 ft.; waiting on pump.

Humble O. & R. Co. No. 1-X Wilson, W. M. Harvey Sur.
Coring shale 4,124 ft.

Damon Mound—Brazoria County

Sinclair Prairie Oil Co. No. 23 Masterson Irrigation, 15 ft. E of W line, 50 ft. N of S line of tract, Lot 6 of Damon Subdv., A. Darst Sur.
Location.

Hastings—Brazoria County

Humble O. & R. Co. No. 4 Cannon, 330 ft. N of S line and E of W line of lease, H.T.&B. Sur. No. 36.
Derrick.

Humble O. & R. Co. No. 3 Cannon, 330 ft. S of N line, and 330 ft. E of W line of 60-ac. tract, H.T.&B. No. 36.
Coring shale 5,965 ft.

Stanolind O. & G. Co. No. 1 R. L. Autrey, 240 ft. S, 330 ft. E of interior NE cor. of 207.8-ac. tract, H.T.&B. Sur. No. 37. Spudding.

Stanolind O. & G. Co. No. 2 Autrey, 240 ft. S and 330 ft. W of most northerly NE cor. of 207.8-ac. tract, H.T.&B. Sur. No. 37.
T.D. 110 ft.; 16-in. csg. at 104 ft.; W.O.C.

Stanolind O. & G. Co. No. 2 Cannon, 330 ft. S, 330 ft. E of NW corner of 40-ac. tract, H.T.&B. No. 36.
Drlg. shale 5,707 ft.

Stanolind Oil & Gas Co. No. 3 Kidd, 1,465 ft. E of W line, 210 ft. S of N line of 58.4-ac. tract, A.C.H.&B. Survey No. 2.
Drlg. sand and shells 4,306 ft.

Stanolind O. & G. Co. No. 4 Shaw, 330 ft. S, 990 ft. W of most easterly NE cor. of 120-ac. tract, H.T.&B. Sur. No. 36.
Derrick.

Stanolind O. & G. Co. No. 5 Shaw, 330 ft. W, 990 ft. S of most northerly NE cor. of 120-ac. tract, H.T.&B. Sur.No. 36.
M.I.R.

Manvel—Brazoria County

Burton Drlg. Co. No. 1 Gubbert, center of Lot No. 7 H.T.&B. Survey No. 23.
Derrick.

J. W. Sorrells' No. 1 Swift, Blk. 21, Abst. 218, H.N. Little Sur.
Derrick.

Texas Co. No. 2 J. L. Lemmer, S 45 degrees, E 990 ft. and N 45 degrees, E 330 ft. from W corner of 150-ac. lease, T. Sproggins Survey.
T.D. 4,130 ft.; 7-in. csg. at 4,102 ft.; W.O.C.

Texas Co. No. 13-A Belcher, S 45 deg., E 1,131 ft. and S 45 deg. W, 330 ft. from the N cor. of lease, H. N. Little Sur.
T.D. 4,305 ft.; P.B. 2,730 ft.; 7-in. csg. 3,594 ft.; set screen; swabbing.

Texas Co. No. 19-B Belcher, N 42 degrees, E 2,348 feet and N 48 degrees, W 953 feet from SW corner of lease, H. N. Little Survey.
Drlg. hard sand 2,695 ft.

Texas Co. No. 20 Houston Oil Field Assn., 330 ft. E and 247.5 ft. S of NW corner of Lot 21, A.C.H.&B. Sur.
Rig up.

Texas Co. No. 20-B Houston Oil Field Assn., 330 ft. E and 247 ft. S of NW cor. of Lot 21-A, A.C.H.&B. Sur. No. 91.
Drlg. sandy lime 4,251 ft.

Texas Co. No. 2 Dawson, 247 ft. S, 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Anahuac—Chambers County

Humble O. & R. Co. No. 7 Engels, 466 ft. N of S line, 1,009 ft. E of No. 6, H.&T.C. Survey, section 50.
T.D. 7,082 ft.; top sand 6,929 ft.; 7-in. csg. at 7,040 ft.

Humble O. & R. Co. No. 7 Broussard, 1,339 ft. WE line, 466 ft. SN line of H.& T.C. Sur., sec. 63.
T.D. 7,082 ft.; top sand 6,964 ft.; 7-in. csg. at 7,040 ft.

Humble O. & R. Co. No. 9 Broussard, 466 ft. W of E line, 1,337 ft. S of N line of H.&T.C. Survey No. 63.
Rig up.

Humble O. & R. Co.'s No. 8 Clark, 460 ft. WE line, 2,212 ft. NS line of H.T.&C., Sec. 57.
Coring shale 7,020 ft.

Humble O. & R. Co. No. 3 W. C. Tyrell, 466 ft. SN line and 1,317 ft. WE line, sec. 52, H.&T.C. Sur.
Drlg. shale 5,777 ft.

Humble Oil & Ref. Co. No. 14 Middleton, 466 ft. N of S line, 873 ft. E of No. 13, section 58, H.&T.C. Survey.
Derrick.

Humble O. & R. Co., No. 6 White, 325 ft. N of No. 5, 466 ft. E of W line of lease, J. McGahey Survey.
T.D. 7,110 ft.; top sand 7,082 ft.; 7-in. csg. at 7,081 ft.

Humble O. & R. Co. No. 3 Zappe, 859 ft. N of No. 1, 466 ft. W of E line of H.&T.C. Sur., sec. 51.
T.D. 7,015 ft.; coring sand 6,992 ft.

Humble O. & R. Co. No. 2 Broussard, 2,332 ft. E of W line, 2,332 ft. N of S line of Sec. 63, H.&T.C. Sur.
Location.

Sun Oil Co. No. 7 White, 2,333 ft. W of E line, 467 ft. N of S line of J. McGahey Survey.
Drlg. shale 1,465 ft.

Sun Oil Co. No. 8 White, 1,596 ft. W of E line, 1,345 ft. N of S line of J. McGahey Survey.
16-in. csg. at 69 ft.

Barbers Hill—Chambers County

Sinclair Prairie No. 19 Wilburn, 150 ft. W of No. 18, 50 ft. SN line of lease, Henry Griffith Sur.
Drlg. salt 3,691 ft.

Sun Oil Co. No. 18 Wilburn, 80 ft. N, 75 ft. E of SW cor. of tract, Wm. Hodges Sur.
T.D. 5,126 ft.; sandy shale; 9⅝-in. csg. at 5,124 ft.

Stanolind Oil & Gas Co. No. 20 Wilburn, 50 ft. E of W line, 50 ft. S of N line of tract, Wm. Hodges Sur.
T.D. 5,292 ft.; waiting orders.

Stanolind O. & G. Co.'s No. 29 Chambers, 224 ft. E of No. 21 W. Bloodgood Sur.
Derrick.

Stanolind O. & G. Co.'s No. 31 Chambers, 20 ft. S, 50 ft. W of NW cor. of Sur. A lease.
T.D. 5,358 ft.; P.B. to 4,420 ft.

Superior Oil Co. No. 2-B Barber, 150 ft. due E of the NE corner of Barber "C" lease, thence 75 ft. due N.
Running csg. in salt 1,398 ft.

Texas Gulf Prod. Co. No. 7 Wilburn, 70 ft. W of E line, Wm. Hodge Sur.
Drlg. shale and lime 4,801 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 1 Cooper Heirs, 466 ft. from S and E lines, 140-ac. lease, S. Burney Sur.
T.D. 6,625 ft.; top sand 6,601 ft.; 7-in. csg. 6,596 ft.; P.B. and drilled out cement to 6,608 ft.

Stanolind O. & G. Co.-State No. 1 Turtle Bay, 466 ft. S and E from SW cor. of Middleton 120-ac. tract.
Location.

Lost Lake—Chambers County

Pure Oil Co. No. 20 Mayes, 360 ft. NE of No. 3, 360 ft. NW of No. 15, E. H. R. Wallace Sur.
Drlg. shale 312 ft.

Big Creek—Fort Bend

Gulf Prod. Co. No. 67 Davis, 2,510 ft. NE along SEL of lease from W and SW corner of Texas Co. 300-ac. tract and 2,755 ft. NW at R/A, M. Young Sur.
Rig up.

Marten Drlg. Co. No. 1 W. C. Moore, 25 ft. S of NW line and 111 ft. SW along NW line from N cor. of Atlantic 25-ac. Moore lease, B. Wickerson Sur.
Rig up.

Trans. State Oil Co. No. 3 Ahlers, 130 ft. SW of Moran Corp. No. 1 Ahlers and 124 ft. SE of Jeanae No. 1 Bryan, M. Young Survey.
13-in. csg. at 1,321 ft.; drlg. plug.

Blue Ridge—Fort Bend County

Gulf Prod. Co. No. 19-B Bassett Blakely, 540.5 ft. along W line of NW corner of Lot 5, Block "O" and 306.5 ft. at R/A E. Drew Survey.
T.D. 4,410 ft.; P.B. to 4,106 ft.

Orchard—Fort Bend County

Gulf Prod. Co. No. 44 Moore, 500 ft. NW of No. 42, Leo Burknapp Sur.
Drlg. shale 4,918 ft.

Gulf Refg. Co. No. 45 Moore, 1,050 ft. E along S line from SW corner of Survey, 1,149 ft. N at R/A, German Immigration Sur. No. 8.
Drlg. shale and lime 5,044 ft.

Gulf Prod. Co. No. 3-A Moore, 210 ft. E. 1,250 ft. to SE corner tract No. 8, Leo Burknepp Survey.
Drlg. shale and lime 1,200 ft.

Thompson—Ft. Bend County

Gulf Prod. Co. No. 28 Booth, 2,797 ft. W along N line of J. Rabb Survey from NE corner of W½ of same and 554 ft. N at R/A, S. Kennedy Sur.
Surface sand 51 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 1-C Marrs-McLean, 450 ft. S of N line of Lot 5, M. Dunman Sur.
T.D. 5,317 ft.; P.B. to 4,450 ft.; set screen; flowing by heads.

Stanolind O. & G. Co. No. 5 B.&N.O., 138 ft. S, 150 ft. E of NE cor. of Fitzsimmons Sur.
Drlg. shale 4,819 ft.

Stanolind O. & G. Co. No. 51 Cade, 690 ft. SN line, 630 ft. WE line of 460-ac. tract, Fitzsimmons Sur.
T.D. 6,276 ft.; I.P. 250 bbls. per day, ¼-in. choke.

Stanolind O. & G. Co. No. 54 Cade, 424 ft. S, 38 ft. E of Cade No. 37, W. Fitzsimmons Sur.
Derrick.

Stanolind O. & G. Co. No. 55 Cade, 138 ft. S, 974 ft. E from NE corner of Wm. Hudson Survey.
Derrick.

Stanolind Oil & Gas Co. No. 18-B Smith Royalty, 44 ft. E and 1,188 ft. S from NE corner of Lot No. 30, Subdivision of Corona, 200-ac. tract in Smith 40-ac. tract, M. Dunman Sur.
Derrick.

Dickinson—Galveston County

Coast Petroleum Co. No. 3 Stewart, 660 ft. E of No. 1 and 10,800 ft. NSL of W. K. Wilson Sur.
Moving in.

Humble O. & R. Co. No. 1-B San Leon, 381 ft. SE of NW line and 300 ft. SW of NE line of 8¼ of Blk. 102, A. E. Edwards Sur.
T.D. 9,199 ft.; 7-in. csg. at 8,476 ft.; drilled plugs and perforated from 8,356-75 ft. with 20 holes; testing.

Humble O. & R. Co. No. 2 Anderson, 352 ft. WE line, 777 ft. EW line and 328 ft. NS line, Lot 2, Blk. 15, J. Sellers Sur.
T.D. 9,112 ft.; top sand 9,081 ft.; 7-in. csg. 9,109 ft.; I.P. 18 bbls. per hour, ¼-in. choke; T.P. 2,350 lbs.; C.P. 2,925 lbs.

Humble O. & R. Co. No. 2-B Bayou Dev. Co., 600 ft. EW line of lease, 1,856 ft. due S of No. 1-B, John Sellers Sur.
Rig up.

Humble O. & R. Co. No. 3-B Stewart, 3,954 ft. S along E line from NE cor. and 577.2 ft. W at right angles, J. Sellers Sur.
T.D. 8,629 ft.; P.B. 8,550 ft.; tested mud, oil and salt water; P.B. to 8,400 ft.; W.O.C.

Humble O. & R. Co. No. 5-A Stewart, 464 ft. W of E line of Stewart "A" Lease. 5,500 ft. due S of No. 2-A Stewart, John Sellers Sur.
Rig.

Humble O. & R. Co. No. 6-A Maco Stewart, 6,087 ft. S of NE cor., 1,390 ft. W of E line and 1,390 ft. E of W line and 466 ft. N of S line of Stewart.
7-in. csg. 8,974 ft.; T.D. 9,142 ft.; P.B. to 7,148 ft. and perforated; now milling through csg. at 7,065-82 ft.

Humble O. & R. Co. No. 1 W. H. Wilson, 466 ft. NSL and 346 ft. EWL of lease. 164 ft. S and 751 ft. E of San Leon Farm No. 1 in Block 103, San Leon Farm Subdv., A. E. Edwards Sur.
Location.

Pure Oil Co. No. 3 Shelar, 500 ft. N and 100 ft. E of No. 1, B.B.B.&C. Sur.
Rig up.

Stanolind O. & G. Co. No. 2 State, 1,369 ft. E of No. 1 State.
T.D. 9,135 ft.; 7-in. csg. 9,120 ft.; cemented back from 9,060 to 8,980 ft.; P.B. and perforated csg. from 8,040-70 ft. to 7,980 ft.; testing.

Stanolind O. & G. Co. No. 3 State, 683 ft. SE of No. 1, 218 ft. N of S bank of Dickinson Bayou Sur., Tract No. 3.
T.D. 8,132 ft.; 7-in. csg. 8,080 ft.; P.B. and drilled to 8,050 ft.; cemented back T.D. 4,950 ft. (corrected).

Stanolind O. & G. Co. No. 4 State, 935 ft. S, 11 deg. S, 15 ft. E of Pure Oil Co. No. 1 Shelor, Tract No. 3.
Derrick.

Stanolind O. & G. Co. No. 5 State, 1,347 ft. S, 19 deg. 53 ft. E of Humble No. 1 Townes, Tract 3.
Waiting on derrick.

Batson—Hardin County

Deering et al No. 2 Jordan, 260 ft. WE line and 125 ft. NS line of 15.17-ac. tract, W. Donoho Sur.
Derrick.

John Deering et al No. 1 J. W. Whitley, 140 ft. SN line, 240 ft. EW line of 130-ac. tract, W. Donoho Sur.
Drlg. sand 4,512 ft.

Saratoga—Hardin County

Hines Oil Co. No. 2 Caswell, 8,600 ft. N of S line, 1,376 ft. E of W line of B.B.B.&C. R.R. Co. Sur. No. 72.
T.D. 4,950 ft. (corrected).

Rio Bravo Oil Co. No. 146-C.
Sandy shale showing oil at 1,247 ft.; reaming to set screen.

Pierce Junction—Harris County

Harrison and Abercrombie No. 8 Ritter, 50 ft. W and 20 ft. at R/A from SL of lease, J. Hamilton Sur.
Rig up.

Rio Bravo Oil Co. No. 4 G.H.&S.A., 330 ft. E, parallel to G.H.&S.A. Railroad track.
Drlg. shale 2,535 ft.

Humble—Harris County

Texas Co. No. 50 Stevenson, 335 ft. S and 330 ft. E of NW corner lot 6-B, J.B.
T.D. 3,526 ft.; conditioning mud.

Mykawa—Harris County

West Prod. Co. No. 7 Irwin, 330 ft. S of

No. 6, 493 ft. WE line of lease, W. B. Walker Sur.
T.D. 4,500 ft.; oil sand; running tubing; 7-in. csg. at 4,390 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 2 First National Bank, 257 ft. NS line, 8,257 ft. from SE line of 239-ac. tract, Callahan and Vince Sur.
Digging pits.
Stanolind O. & G. Co. No. 1 Griffin, 250 ft. E. 150 ft. S of the NW cor. of J. T. Griffin et al, Tract 153, H.T.&B. Sur. No. 36.
Drlg. sand 2,146 ft.
Stanolind O. & G. Co. District No. 10 (workover).
T.D. 6,850 ft.; making a coring test.
Stanolind O. & G. Co. No. 1, District No. 25, center of Lot 9, Blk. 111, H.T.&B. Sur. No. 5.
Rig up.
Stanolind O. & G. Co. No. 1, District 46, center of Lot 8, Blk. 158, H.T.&B. Sur. No. 5.
Derrick.
Sterling O. & R. Co. (Diadem) No. 1 Summers, 500 ft. W and 150 ft. N of No. 1 Dean, center of Blk. 138, H.T.&B. Sur. No. 5.
Drlg. shale 650 ft.

Tomball—Harris County

Amerada Petroleum Corp. No. 4 Nelson, 466 ft. S of N line and 333 ft. E of W line of lease, J. House Survey.
Spudded.
Humble O. & R. Co. No. 2 Muller, 466 ft. at R/A from S line, 466 ft. at R/A from E line, C. N. Pillott Sur.
T.D. 5,539 ft.; 7-in. csg. 5,532 ft.; I.P. 20 bbls. per hour, ¼-in. choke; T.P. 800 lbs.; C.P. 750 lbs.
Humble O. & R. Co. No. 2 Hardy, 1,726 ft. along SW line in a southwesterly direction from most easterly corner, thence NW 342 ft. at R/A, J. Pruitt Survey.
T.D. 5,559 ft.; 7-in. csg. 5,543 ft.; I.P. 23 bbls. per hour, ¼-in. choke; T.P. 900 lbs.; C.P. 850 lbs.
Humble O. & R. Co. No. 3 Hillegeist, 1,284 ft. N of S line, 185 ft. W of E line, J. House Survey.
Drlg. shale and lime 4,390 ft.
Humble O. & R. Co. No. 2 Holderrieth, 280 ft. N of most northerly S line, 280 ft. S of N line, 1,155 ft. E of most westerly W line of lease.
Drlg. shale 2,784 ft.
Texas Co. No. 2 W. B. Scherer, 333 ft. W of E line, 1,799 ft. N of S line of 126-ac. tract of lease, J. House Survey No. 34-A.
T.D. 5,596 ft.; I.P. 20 bbls. per hour; T.P. 925 lbs.; C.P. 825 lbs.
Humble O. & R. Co. No. 1 Tomball Townsite Unit No. 9, 500 ft. SE of NW line, 447.5 ft. SW of NE line, 242.5 ft. NE of SW line, 565 ft. NW of SE line of unit, J. House Sur.
Drlg. 100 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Broussard Trust, C. Williams Sur., 466 ft. out of SW cor. of 72.76-ac. tract.
Bldg. derrick.
Glenn McCarthy No. 1 Bessie Longe, H. Williams Sur., 330 ft. out of SE cor. of 130-ac. tract.
Bldg. derrick.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2-A Pipkin & Davis, 1,430 ft. SW of NE cor. of Pipkin & Davis lease along SE line of same and 50 ft. SE at right angles, William McFaddin Sur.
T.D. 6,698 ft.; milling at 6,615 ft.

Fannett—Jefferson County

Blue Eagle Oil Co. No. 2 Junker, 225 ft. due S from No. 1 Junker, W. H. Smith Sur.
Drlg. shale 4,701 ft.; no report.
Gulf Prod. Co. No. 6 Junker, 20 ft. W along N line of 260-ac. tract from NE cor. and 580 ft. at R/A, Wm. Smith Sur.
Drlg. shale 5,558 ft.

Cleveland—Liberty County

Gulf Prod. Co. No. 13-C Kirby Lbr. Co., 2,472 ft. N and 3,080 ft. E from NE corner of J. Eldridge Survey in the John Pleasant Survey.
Drlg. shale 3,528 ft.

Esperson—Liberty County

General Crude Oil Co. No. 1 Halvaty, 467 ft. out of SE cor. of F. M. Gardner Sur.
T.D. 8,916 ft.; P.B. 6,570 ft.
General Crude Oil Co. No. 13 Davis, 660 ft. N of No. 12 Davis and 330 ft. WE line of lease, D. Kokernot Sur.
Drlg. shale and lime at 3,225 ft.
General Crude Oil Co. No. 22 Esperson, 550 ft. N along W line of survey from SE cor. of D. K. Kokernot Sur., thence 1,185 ft. E at right angles.
T.D. 5,878 ft.; P.B. and perforated from 3,976-90 ft.
General Crude Oil Co. No. 23 Esperson, 1,200 ft. N along W line of survey from SE cor. of Kokernot Sur., thence 330 ft. E at R/A, Fisher Sur.
Rig up.
General Crude Oil Co. No. 24 Esperson, 660 ft. N of No. 23 Esperson, 330 ft. EWL of lease, Wm. Bloodgood Survey.
Location.

Hankamer—Liberty County

Gulf Prod. Co. No. 1-A R. J. Weiser, 770 ft. W along S line from SE cor. of survey and 422 ft. at R/A, George Stingier Sur.
T.D. 5,305 ft.; P.B. to 4,306 ft.; drlg. sandy shale at 4,306 ft.

Hull—Liberty County

Houston Oil Co. No. 2 J. C. Baldwin, 225 ft. E of W line, 120 ft. S of N line of 5.74-ac. tract, J. Devore Survey.
S.D. 505 ft.
Humble O. & R. Co. No. 29 Hooks-Guedry, 250 ft. SN line and 300 ft. WE line of 42-ac. tract J. Devore League.
Location.

Bay City—Matagorda County

Skelly Oil Co. No. 1 E. C. Metzger, 466 ft. SN line and 466 ft. EW line of 178.62-ac. tract, M. Cummings Sur.
Drlg. shale and lime 2,874 ft.
Skelly Oil Co. No. 4-B Cobb, 440 ft. NS line and 1,910 ft. EW line of lease, M. Cummings Sur.
Rig up.
Skelly Oil Co. No. 5-B Cobb, 1,100 ft. NS line and 466 ft. EW line of lease, M. Cummings Sur.
Drlg. shale 3,147 ft.

Markham—Matagorda County

H. & A. No. 6 Kountze, 500 ft. E of No. 5, 1,300 ft. E of W line of lease, H. Parker Survey.
Rig up.

Conroe—Montgomery County

Sun Oil Co. No. 15 Keystone Mills.
Drlg. shale and lime 4,819 ft.
West Production Co. No. 3 Foster, T.&N.O. R.R. Co. Survey, sec. 3.
Abd. 3,011 ft.
West Prod. Co. No. 4 Foster Lbr. Co., 466 ft. N and W of SE cor. of T.&N.O. Sur., sec. No. 3.
Drlg. shale 4,518 ft.

Port Neches—Orange County

Texas Co.'s No. 6-B Polk, 1,491.5 ft. S, 934.5 ft. W from most northern NE corner of lease J. Beaumont Survey.
Drlg. shale and lime 5,484 ft.

Livingston—Polk County

Hawkeye Pet. Co. No. 2 Nelson, 660 ft. E of No. 1 and 330 ft. from S line of lease, A. Viesca Sur.
Location.
Humble O. & R. Co. No. 23 Granbury, 466 ft. SW of NEL, 883 ft. SE of No. 22, A. Viesca Survey.
Drlg. shale 4,138 ft.
Ownby-Shell Pet. Corp. No. 8 Pratt, 466 ft. from S and W lines of 220-ac. lease, 708 ft. SE of No. 7, A. Viesca Survey.
Drlg. shale 2,310 ft.

Greta—Refugio County

Hewitt and Daugherty No. 21 Lambert, 466 ft. N line, 512 ft. E line, Blk. 32, C. Hardwick Sur.
Drlg. shale 2,312 ft.
United Prod. Co. No. 22 Lambert, 506 ft. from E line, 466 ft. from N line, Block 22, Hardwick Survey.
S.D. 6,358 ft.

Tomoconnor—Refugio County

Quintana Oil Co. No. 30-A O'Connor, 2,325 ft. SEL, 2,130 ft. NEL, Swisher Sur.
Rig up.
Quintana Pet. Co. No. 31-A O'Connor, 2,330 ft. SE line, 1,200 ft. from NE line, Swisher Sur.
T.D. 5,883 ft.; 7-in. csg. at 5,850 ft.; drlg. plugs.

Placedo—Victoria County

American Liberty Oil Co. No. 3 Gray, 660 ft. SW from No. 2 and in center of tract NW and SE, S.A.&M.G. Sur.
Rig up.
Barnsdall Oil Co. No. 2 W. R. Smith, 1,365 ft. from NE line, 825 ft. from SE line, Lot 7, A. Murray Survey.
Drlg. sand 4,820 ft.
Barnsdall Oil Co. et al No. 1 J. S. Wheless, 330 ft. NE line, 330 ft. SE line, Lot 92, J. M. Bronson Sur. No. 8.
Moving in.
Barnsdall Oil Co. No. 3 J. M. Pickering et al, 330 ft. from R.R., 612 ft. from No. 2, offset to Smith & Gulf No. 1 Boehm, S.A.&M.G. Sur. No. 5.
Rig up.
Eastern Texas Prod. Co. No. 1 Krappa, 330 ft. out of S cor. of 40-ac. tract, Lot 12, Wm. Rupley Sur.
T.D. 6,056 ft.; D.S.T. 5,990-6,049 ft.; showed oil, mud and salt.
C. F. McGrew No. 1 Hadley, center of 20-ac. lot, S.A.&M.G. Sur., Sec. 9, Blk. 49, Lots 1 and 2.
Location.
National Pet. Corp. No. 1 J. Stehle, 330 ft. out of E cor. of 156.8-ac. tract, Piedras Gellardo Sur.
Drlg. shale 2,680 ft.
Superior O. & G. Co. No. 1 Henderson and Pickering, 330 ft. out of S cor. of Lot 93, of 29.2-ac. tract, S.A.&M.G. Sur. No. 8.
Drlg. shale 4,700 ft.
Superior O. & G. Co. et al No. 2 Jones, 330 ft. out of the S corner of 24.47-ac. tract, Wm. Rupley Survey A-290.
Spudded.
Westgate Oil Co. No. 2 Mieska, 330 ft. out of E corner of 60-acre tract, S.A.& M.G. Survey No. 8, A-382.
T.D. 4,768 ft.; 7-in. csg. 4,752 ft.; set screen at 4,768 ft.; tested 2,000 lbs. pressure; to deepen.

Clay Creek—Washington County

Joe Pomykal No. 2 Klatte (O.W.D.D.).
Drlg. shale 2,230 ft.
Sun Oil Co. No. 3 A. Draper, 200 ft. EW line, 1,025 ft. SN line, 210-ac. tract, J. F. Perry Sur.
Rig up.

Louise—Wharton County

Pure Oil Co. No. 1 Jones, 466 ft. NW, 466 ft. SW of E corner of 128-ac. tract. Morris & Cummins Survey No. 19.
T.D. 5,160 ft.
Pure Oil Co. No. 3 Weaver, 650 ft. each way out of N cor. sec. 22, Morris & Cummings Sur.
Bldg. derrick.

Pickett Ridge—Wharton County

Texas Co. No. 10 Pierce, N 73 degrees 18 ft. W, 1,000 ft. from No. 3-A and S 3 degrees 57 ft. W, 928 ft. from 9-A.
Drlg. shale and lime 2,038 ft.
Texas Co. No. 11-A Pierce, 1,000 ft. N, 73 degrees 18 ft. W and 1,000 ft. S, 16 degrees 42 ft. W from No. 10-A, I.&G.N. R.R. Sur. No. 38.
Rig up.
Trinity Drillers, Inc. No. 1 Joseph Marek, 488 ft. out of S cor. sec. 76, I.&G.N. Sur. No. 76.
Moving in material.

Withers—Wharton County

Texas Co. No. 2-C Pierce, 17,997 ft. N. 62 degrees E and 2,467 ft. N, 28 degrees W from SW corner of Pierce Estate, John Cardwell Survey.
Drlg. shale and lime 5,430 ft.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 11 Bay St. Elaine, 5,008 ft. S and 4,830 ft. E of NW cor. of sec. 17-22s-18e.
Drlg. in shale at 5,509 ft.

Bayou Mallet—Acadia Parish

Superior Oil & Prod. Co. et al No. 1 M. Savoy, 400 ft. N, 280 ft. E of SW cor. of 28.9-ac. tract, being the part of a 93.5-ac. tract, sec. 47-7s-1e.
Drlg. sand and shale 6,982 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 26 Watkins, 3,330 ft. W, 100 ft. S of NE cor. of Sec. 18-12s-12w.
Dredging canal.
Shell Pet. Corp. No. 31 Watkins, 105 ft. N, 3,245 ft. E of SW cor. sec. 8-12s-12w.
Coring sand 4,680 ft.

Chenevyville—Rapides Parish

Amerada Pet. Corp. No. 1 Beazley, 1,000 ft. N, 882 ft. W of SE cor. of sec. 32-1s-2e.
M.I.R.
Texas Co. No. 1 Well, 495 ft. W, 550 ft. N of No. 1 Well, sec. 53-1s-2e.
Rig up.

Caillou Island—Terrebonne Parish

Texas Co. No. 2 Terrebonne Bay 2,732 ft. S, 4,308 ft. W of SE corner section 19-23s-20e.
Drlg. in shale 1,931 ft.
Texas Co. No. 26 State, 172 ft. from S line, 1,796 ft. from W line, sec. 17-23s-20e.
T.D. 4,693 ft.; P.B. and sidetracked at 2,368 ft.; T.D. of sidetracked hole 4,362 ft.; I.P. 1,018 bls. per day, ⅝-in. choke. T.P. 675 lbs.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 C. O. Ardoin, C of 20-ac tract in sec. 28-7s-2w.
Derrick.
Continental Oil Co. No. 1 Johnson, 660 ft. W, 330 ft. N of SE cor. of NE¼ of irregular sec. 30-7s-2w.
Location.
Continental Oil Co. No. 1 D. J. Miller, C of 20-ac. tract, being W½ of NE¼ of SW¼ of sec. 28-7s-2w.
Drlg. sand and sandy shale at 7,750 ft.
Continental Oil Co. No. 1 Miller, C of N½ of SE¼ of SE¼ of sec. 29-7s-2w.
Drlg. shale 7,904 ft.
Continental Oil Co. No. 1 P. W. Miller, 990 ft. N, 660 ft. W of NE cor. of SW¼ of sec. 28-7s-2w.
Location.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, 4,825 ft. from NE cor., 283 ft. S of N line at R/A in sec. 33-10s-2e.
Derrick.
Humble O. & R. Co. No. 10 Community, 1,690 ft. NW along SW line from SE cor. of sec. 32, 481 ft. NE at R/A to SW line of sec. 32-10s-2e.
Derrick.
Humble O. & R. Co. No. 6 Gumble, 2,734 ft. NW from S cor. of sec. 33, along SW line of section, thence 219 ft. at R/A from SW line of sec. 33-10s-2e.
Digging cellar.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 Bernard, 145 ft. N, 75 ft. W of NE corner of SE¼ of SE¼ sec. 9-12s-4e.
Location.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 4 School Land, sec. 16-14s-13w.
Derrick.
Burton Sutton Oil Co. No. 12 School Land, sec. 16-14s-13w.
Rig up.
Magnolia Pet. Co. No. 15 Cameron Meadows, 650 ft. S of N line of sec. 21, 500 ft. SE of No. 9, sec. 21-14s-13w.
T.D. 5,262 ft.; top oil sand at 5,254 ft.; 7-in. csg. at 5,242 ft.; started making water; was killed to reset screen; cutting and pulling tubing.

Choctaw Dome—Iberville Parish

Standard Oil Co. No. 8 Myrtle Grove Wilburt, 500 ft. N, 725 ft. W of SE cor. of SW¼ of sec. 52-9s-11e.
Drlg. in shale at 5,162 ft.
Standard Oil Co. No. 6 Gay, 400 ft. N, 50 ft. W of No. 5, sec. 52-9s-11e.
Comp. canal.

Four Isle—Terrebonne Parish

Texas Co. No. 5 State, 885 ft. S, 2,327 ft. E of NW cor. of sec. 24-21s-16e.
Location.

Garden Island Bay—Plaquemines Parish

Texas Co. No. 13 State, sec. 107-23s-23e.
Location.
Texas Co. No. 17 State, 1,970 ft. N, 1,648 ft. E of SW cor. of Sec. 37-23s-23e.
S.D. 5,527 ft.; topped salt at 5,510 ft.; P.B. to 4,967 ft.; perforated csg. at 4,886-4,905 ft.; I.P. 295 bbls. per day, ⅝-in. choke; 160 lbs. T.P.
Texas Co. No. 18 State, 1,368 ft. N, 2,318 ft. E of SW cor. of Sec. 37-23s-23e.
Preparing to spud.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 9 Castle, 517 ft. S and 330 ft. E of No. 3, Sec. 18-9s-8w.
T.D. 7,075 ft.; set csg.; I.P. 600 bbls. per day, ¼-in. choke; T.P. 2,075 lbs.; C.P. 1,250 lbs.
Fohs Oil Co. No. 10 Castle, 575 ft. N and 500 ft. W of SE corner of NW¼ of SE¼ sec. 14-9s-8w.
Drlg. sand 250 ft.
Fohs Oil Co. No. 1 Frost, 425 ft. W, 200 ft. N of SE cor. of sec. 11-9s-8w.
Digging pits.
Texas Co. No. 8 Nickerson fee, 647 ft. N, 290 ft. W of SE cor. of NW¼ of sec. 12-9s-8w.
Drlg. shale 200 ft.
Union Sulphur Co. No. 5 Castle, 426.6 ft. E, 574.3 ft. N of SW cor. of SE¼ of NE¼ of sec. 14-9s-8w.
Drlg. shale 6,148 ft.
Union Sulphur Co. No. 6 Castle, 336 ft. S, 3,510 ft. W of NE cor. of sec. 13-9s-8w.
Coring sand 5,295 ft.
Union Sulphur Co. No. 6 Clara Barbe Est., 600 ft. NW of No. 14 State, 648 ft. S and 387 ft. W of NE cor. of sec. 11-9s-8w.
Drlg. sand 930 ft.
Union Sulphur Co. No. 5 Powell Lumber Co., 500 ft. SW of No. 17 State, 1,443 ft. S and 1,020 ft. E of NE cor. of NW¼ of sec. 12-9s-8w.
Derrick.
Union Sulphur Co. No. 10 State, 2,376 ft. N, 217 ft. E, of SW cor. of sec. 12-9s-8w.
Location.
Union Sulphur Co. No. 17 State, 241 ft. N and 689 ft. E of SE cor. of NW¼ of NW¼ of sec. 12-9s-8w.
Drlg. hard lime at 6,633 ft.
Union Sulphur Co. No. 18 State, 3,322 ft. S, 10 ft. E of NW¼ of NW¼ of sec. 12-9s-8w.
Driving piling.
Union Sulphur Co. No. 13 State, 1,464 ft. E, 2,088 ft. N of SW cor. of sec. 12-9s-8w.
Rigging up.

Gueydan—Vermilion Parish

Pure Oil Co. No. 6 Alliance Trust, 667 ft. E, 1,878 ft. S line of lease, sec. 34-11s-1w.
T.D. 9,545 ft.; sidetracked, T.D. 7,204 ft.; drill stem stuck.

Hackberry—Cameron Parish

Browning Oil Co.'s No. 1 Ellender, Sec. 27-12s-10w.
T.D. 3,356 ft.; 6⅝-in. csg. at 3,340 ft.; cut and pulled csg.; S.D.
Calcasieu Oil Co. No. 6 Hanzen, 596 ft. S, 2,313 ft. W of NE corner of sec. 14-12s-10w.
Location.
Gulf Ref. Co. No. 20 Irwin, 1,605 ft. W, 1,235 ft. N of SE cor. of sec. 13-12s-10w.
Drlg. in sand and shale 6,551 ft.
Stanolind Oil & Gas Co. No. 11-B, Gulf Land, 3,665.6 ft. S, 1,590 ft. W of NE corner of W½ of sec. 14-12s-10w.
Rig up.
Stanolind Oil & Gas Co. No. 12-B Gulf Land, 400 ft. N, 1,030 ft. W of SE corner of NW¼ of sec. 14-12s-10w.
Drlg. in shale 943 ft.
Texas Co. No. 11 State, 961 ft. E, 152 ft. N of NE cor. of sec. 13-12s-9w (workover).
T.D. 6,602 ft.; 5-in. csg. 6,523 ft.; shut down.
Texas Co. No. 18 State, N 13 deg. 20 ft. W, 4,000 ft. from No. 13, Sec. 44-12s-9w.
T.D. 7,687 ft.; recovered 3,910 ft. of oil on D.S.T. 7,477-7,508 ft. with ¼-inch choke; perforated 7,626-44 ft. and 7,492-7,526 ft.; setting screen.
Texas Co. No. 19-B State, 150 ft. S, 470 ft. E of No. 17, or 286 ft. S and 2,909 ft. E of NE cor. of sec. 13-12s-10w, but in sec. 13-12s-9w.
Location.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 19 Heyd, 1,200 ft. S, 99 ft. W of NE cor. of NW¼ of Sec. 13-9s-7w.
T.D. 3,112 ft.; reaming.
Shell Pet. Corp. No. 20 Heyd, 990 ft. S, 951 ft. E of NW cor. of NW¼ of sec. 13-9s-7w.
Rig up.
Shell Pet. Corp. No. 5 Tuten, 330 ft. S line 2,479 ft. W of NE cor. of SE¼ sec. 13-9s-7w.
Drlg. sand and gravel 300 ft.
Shell Pet. Corp. No. 7 Stafford, 330 ft. E and 796 ft. N of SW cor. of W½ of NW¼ of section 18-9s-7w.
10¾-in. csg. 1,304 ft.; T.D. 1,366 ft.

New Iberia—Iberia Parish

Harrison & Abercrombie No. 4 Schwing, Sec. 56-12s-7e.
Top salt 7,194 ft.; T.D. 7,200 ft.; P.B. to 6,295 ft.; sidetracked at 6,298 ft.; abd.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 2 Roane, 825 ft. S of No. 1, 527 ft. N and 557 ft. E of SW cor. of sec. 40-13s-9e.
Drlg. in sandy shale at 2,302 ft.

Herton Oil Co. No. 1 Banita, 960 ft. W of No. 2 Roane, 657 ft. N, 990 ft. W of No. 2 and 396 ft. W of SW cor. of sec. 40-13s-9e.
Location.

Jennings—Acadia Parish

Abshire Bolyard No. 4 Jules Clement, 378 ft. E, 86 ft. N of SW cor. of Sec. 41-8s-2w.
T.D. 1,909 ft.; 7-in. csg. at 1,820 ft.; I.P. 288 bbls. per day.

Port City Oil Co. No. 17 Jennings Heywood, 55 ft. S and 55 ft. E of NW cor. of lease in sec. 41-9s-2w.
Location.

Ratcliff et al No. 7 Martin, 295 ft. S and E along section line from NW cor. of sec. 47-9s-2w.
Coring in sand 1,707 ft.

Shell Pet. Corp. No. 1 Conover-Community, 3,124 ft. E and 215 ft. S of NW cor. sec. 40-9s-2w.
Location.

Stanolind O. & G. Co. No. 15 Houssiere-Latriele.
Temp. abd. 7,455 ft.

Lafitte—Jefferson Parish

Texas Co. No. 3 Rigolettes, sec. 30-17s-24e.
Ready for rig.

Texas Co. No. 3 Lafitte, sec. 19-17s-24e.
T.D. 7,220 ft.; P.B. and sidetracked at 3,271 ft.; drlg. in lime and shale at 6,976 ft.

Texas Co. No. 2 Rigolet Co-operative Co., 467 ft. S, 1,194 ft. W of NE cor. sec. 36-15s-24e.
Cmtd. 7-in. csg. at 9,575 ft.; W.O.C.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 4 LaFourche Basin Levee Board, 500 ft. N of No. 3, sec. 15-18s-25e.
Drlg. in shale at 3,528 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 33 Lake Barre.
T.D. 4,112 ft.; P.B. to 3,200 ft. and sidetracked at 3,020 ft.; drlg. 3,071 ft.

Texas Co. No. 37 State, sec. 20-12s-20e.
Bldg. derrick.

Lake Pelto—Terrebonne Parish

Texas Co. No. 14 State, sec. 8-23s-18e.
T.D. 7,346 ft.; P.B. and sidetracked; Drlg. sandy shale 5,439 ft.

Leesville—LaFourche Parish

Gulf Prod. Co. No. 3 Allen Land Co., 516 ft. along S line, Lot 3, out of SW cor. thence 497 ft. N at R/A, sec. 21-21s-22e.
Location.

Texas Co. No. 25 Leesville.
T.D. 4,754 ft.; sand showing oil from 4,669-4,754 ft.; preparing to test.

Texas Co. No. 23 Leesville, 975 ft. S, 1,975 ft. W of NW cor. of SW¼, Sec. 26-21-22.
Derrick.

Texas Co. No. 41 Leesville, 1,980 ft. S, 2,884 ft. W of NE cor. of SE¼ sec. 27-21s-22e.
Drlg. in cap rock at 4,560 ft.

Texas Co. No. 43 Leesville (L.L.&E.), 86 ft. E, 473 ft. S of NW cor. of NW¼ of sec. 26-21s-22e.
Bldg. derrick.

Texas Co. No. 44 Leesville (L.L.&E.), 1,481 ft. W, 275 ft. N of NE cor. of SE¼ of sec. 27-21s-22e.
Rig up.

Roanoke—Jefferson Davis Parish

Glassell and Gulf Prod. Co. No. 1 T. A. Anding, 217 ft. N and 375 ft. W of SE cor. of sec. 2-9s-4w.
Drlg. shale 2,670 ft.

Shell Pet. Corp. No. 2 Carter, 230 ft. E and 187 ft. N of SW cor. of sec. 1-9s-4w.
Drlg. shale 8,128 ft.

Humble O. & R. Co. No. 5 Kratzer, 600 ft. EW line, 1,000 ft. SN line of 120-ac. lease, sec. 11-9s-4w.
Top sand 8,687 ft., 7-in. csg. 8,688 ft.; T.D. 8,694 ft.; I.P. 600 bbls. per day, ¼-in. choke; T.P. 1,150 lbs.; C.P. 1,475 lbs.

Humble O. & R. Co. No. 2 Nelson H. Thomas, 2,604 ft. W, 1,200 ft. S of NE cor. of sec. 11-9s-4w.
Rig up.

Humble O. & R. Co. No. 3-B De Vilbiss, 470 ft. N of S line, 1,500 ft. W of E line of 8½ of sec. 11-9s-4e.
Drlg. shale and lime 5,799 ft.

Port Barre—St. Landry Parish

Gulf Refining Co. No. 1 Sibille, 2,230 ft. N, 320 ft. W at R/A from SE cor. of sec. 7-4s-7e.
Drlg. in shale; no show, at 4,847 ft.

Pacheco Oil Co. No. 1 Gaudet, Sec. 4-4s-6e.
Made D.S.T. 3,417-37 ft.; showed 2 stands oil and sand, 100 lbs. pressure; waiting orders.

Pan American Prod. Co. No. 1 Watkins, 1,150 ft. N and 435 ft. S of NE cor. of Watkins Tract.
Drlg. 75 ft.

St. Martinville—St. Martin Parish

Coastal Oil Co. No. 1 A. O. Ladeaux, in center of tract and 236 ft. E of W line of sec. 5s-11s-4e.
S.D. 5,694 ft.; conditioning mud.

Coastal Plains Oil Corp. No. 1 A. L. Domengeaux, 330 ft. from W line, 126.5 ft. from N and S lines of 50-ac. Arpent tract, Sec. 57-11s-6e.
S.D. 5,341 ft.

Tide Water Oil Co. No. 2 Smedes, 660 ft. S, 660 ft. W of NW cor. of Smedes tract, Sec. 57-11s-6e.
Drlg. in shale at 8,035 ft.

Sweet Lake—Calcasieu Parish

Pure Oil Co. No. 13 Yount Lee, 800 ft. S, 66 deg. 42 ft. E of No. 12, sec. 13-13-13.
T.D. 7,701 ft.; set 7,375 ft. of 9⅝-in. csg. and 6,439 ft. of 6⅝-in. csg. at 7,701 ft.; temporarily S.D.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 819 fee, 2,525 ft. N and 595 ft. E of center tract, sec. 29-9s-10w.
Drlg. hard shale 3,401 ft.

Union Sulphur Co. No. 820 fee, 2,936 ft. N and 317 ft. W, center of sec. 29-9s-10w
Drlg. hard rock 2,879 ft.

Starks—Calcasieu Parish

L. R. Welbite No. 1 Industrial Lbr. Co., 675 ft. W and 100 ft. S of NE cor. of NE¼ of SE¼ of sec. 19-9s-12w.
Drlg. hard rock 3,260 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 10 Wilbert, 3,205 ft. N 28 deg. 54 min. E, and 1,085 ft. N, 60 deg. 30 min. W of sec. 1-11s-12e.
Drlg. shale 2,765 ft.

Vinton—Calcasieu Parish

Ged Oil Co. No. 1 Lisco, 330 ft. N and W of SE cor. of NW¼ of sec. 33-10s-12w.
T.D. 910 ft.; 10-in. csg. at 90 ft.; W.O.C.

Gulf Prod. Co. No. 10 Gardner Est., 752 ft. N of S line and center of strip No. 6, sec. 33-10s-13w.
Bldg. road.

Wilson Broach Oil Co. No. 17 Strip, 650 ft. N, 801 ft. W of SE cor. of NE¼ sec. 33-10s-12w.
T.D. 3,958 ft.; I.P. 400 bbls. per day, ¼-in. choke; T.P. 450 lbs.

Miscellaneous Wildcats

TEXAS

Brazoria County

Gulf Prod. Co. No. 1 J. E. Fairfield, 1,700 ft. WEL and 660 ft. SNL of 100-acre lease, being W¼ of 200-acre tract, 4,500 ft. due N of No. 1 Wilkes & Smith, A. Robinson Survey.
T.D. 1,373 ft.; waiting on fuel oil.

Strake Oil Corp. et al No. 1 D. K. Poole, 150 ft. N of N bank of Cedar Lake and 2,250 varas W of E cor. of survey, 750 varas S of S cor. of J. W. Harding Sur.
Location.

Texas Co. No. 2 Freeport Sulphur Co., Conception Areola Sur.
Cutting and pulling csg.; hole cleaned to 1,825 ft.

Burleson County

Red Bank Oil Co. No. 1 Q. B. Crain, 330 ft. from N and W lines of 140-ac. tract and W. C. Pierce Sur.
Drlg. sand and shale 2,397 ft., no report.

Chambers County

Black Gold Oil Co. No. 1 Borrow, 6,433 ft. NW of the SE line, 3,080 ft. SW of NE line, Ruben Borrow Sur.
S.D. 6,900 ft.

Salt Dome Oil Co. No. 2 Lawrence, 466 ft. N of N line of Mrs. Julia H. Casey 532.05-ac. tract and 466 ft. W of most westerly E line of A. B. Lawrence 333.05-ac. tract, Solomon Barrow Sur.
Location.

South Gulf Oil Co. No. 1 J. T. White, 1,653 ft. from E line, 466 ft. from S line of 1,476-ac. tract, James McGahey Sur.
Location.

Calhoun County

Continental Oil Co. No. 2-A American Realty Co., 150 ft. NE of No. 2, Pedro Garcia Sur., Lot 1, Blk. "C."
8⅝-in. csg. 8,023 ft.; T.D.; drlg. on bit head.

Humble O. & R. Co. No. 1 Mrs. Eliza Weidler, 5,655 ft. S, 55 deg. W from a part of intersection of St. L.B.&W.R.R. Sur. and NW line of Jose Maria Rios Sur., 7,210 ft. S, 35 deg. E at R/A Gardner Smith Sur.
T.D. 6,072 ft.; D.S.T. from 5,740-64 ft.; tested 17 stands of salt water; drlg. sandy shale.

Colorado County

Coyle & Concord No. 1 fee, 550 ft. from N line, 1,950 ft. from E line of sec. 45, I.&G.N. Sur.
Drlg. shale 6,467 ft.

Galveston County

Sun Oil Co.'s No. 1 J. D. Hughes, 1,668.9 ft. NW line, 1,212 ft. NE line of W. M. C. Baker Sur.
T.D. 7,995 ft.; heaving shale.

Grimes County

Dr. Marshall et al No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
T.D. 2,826 ft.; P.B. to 2,818 ft.; well flowing brackish water with small amt. of gas through ¼-in. choke; S.D.

Harris County

Cockburn Oil Co.-Shell Pet. Corp. No. 1 Tomkins, 3,375 ft. SN line and 5,356 ft. W line of survey, 1,160 ft. N of Burnett Bay, N. Lynch Sur., Abst. No. 44.
Drlg. shale and lime 4,078 ft.

Harlyn Oil Co. No. 1 Harris County Houston Ship Channel, 330 ft. SNL and WEL of 136-ac. tract Richard and Robert Vince Sur.
Rig up.

A. C. Hill No. 1-A Swilley, 5,426 varas E of W line and 1,960 varas N of S line of survey, C. Victor Blanco Sur..
T.D. 6,659 ft.; washing to bottom.

A. C. Hill No. 1-B Swilley, 6,141 varas E of W line, 1,960 varas N of S line of Sur., center of 200-ac. lease, 365 varas S of N line and 773 varas W of E line of lease, Victor Blanco Sur.
T.D. 7,841 ft.

Texas Gulf Prod. and Bunte O. & G. Co. No. 1 West Moreland Dev. Co., 225 ft. W, 450 ft. S of SW cor. of J. C. McKenzie Sur., J. B. Pier Sur.
Drlg. shale 8,570 ft.

E. E. Young, tr. No. 2 P. S. Griffith, 3,476 ft. S of N line, 2,030 ft. E of W line of A. R. Bodman Sur.
S.D. 4,485 ft.; waiting on csg.

Hardin County

Frank Beaudoin et al No. 1 Walton, A. L. Lancaster Sur.
S.D. 1,900 ft.

Republic Prod.-Houston Oil Co. No. 1 A. A. Burrell, 330 ft. NS line, 1,750 ft. WE line of A. A. Burrell Sur. No. 5-A.
Drlg. shale 6,952 ft.

Jefferson County

Humble Oil & Refg. Co. No. 1 Mrs. M. E. Langham, 466 ft. E of W line, 580 ft. N of S line of lease, C. Williams Sur. No. A-59.
T.D. 6,903 ft.; top sand 6,770 ft.; tested salt water; P.B. to 6,777 ft.

Smith and McDannald No. 1 Grinnell Texas, 330 ft. EW line and 660 ft. SN line of Blk. 8, H.&T.C. Sur., Bishop Subd., Grigsby Sur.
Location.

Sun Oil Co. No. 1 Herbert & Broussard, 6,890 ft. NW along SW line and 660 ft. NE at R/A to SW line, B. Blackman Sur., Abst. No. 2.
T.D. 8,824 ft.; P.B. and sidetracked at 8,282 ft.; washing shale and cement out of hole.

Tatum and Pendergrass No. 1 B. W. Owens, 160 ft. E of W line and 225 ft. S of N line of Lot No. 3, Blk. 9, Range 9, Port Arthur Land Co. Subd., Joseph Grigsley Sur.
S.D. 1,850 ft.; (corrected).

Lavaca County

Goode et al No. 1 J. H. Staffa, center of 122.6-ac. tract, 10 miles N of Hallettsville, W. R. Hensley Sur.
9⅝-in. csg. at 65 ft.; drlg. shale 1,094 ft.

Matagorda County

Continental Oil Co. No. 1 Feife, J. S. Criswell Sur., 3,000 ft. E of W line, 2,800 ft. N of S line of survey.
T.D. 7,629 ft.; fishing.

John Deering No. 1 R. A. Estelle, 2,000 ft. SE, 200 ft. NE from W cor. of 480-ac. tract in Tone and Jameson Sur.
S.D. 6,570 ft.

Hammon Exploration Co. No. 1 Cleveland, 330 ft. NS line and WE line of 68-ac. tract, E. Hall Sur.
Drlg. shale 9,003 ft.

Helmerich & Payne No. 1 Hawkins, 850 ft. S, 70 deg. W of Cockburn Oil Co. No. 6 Hawkins.
T.D. 7,831 ft.; set screen from 7,766-90 ft.; swabbed salt water and oil; no pressure.

H. M. Smith et al No. 2 Wadsworth, 150 ft. SN line, 300 ft. WE line, Lot 33, Blk. 4, S. R. Fisher Sur.
Derrick.

Sterling O. & R. Co. No. 1 Baer estate, 5,274 ft. SW of S cor. of Van Dorn and Bales Sur., 400 ft. NW at right angles in Samuel Hart Sur.
S.D. 6,010 ft.

Sun Oil Co. No. 1 Craig, 1,546.9 ft. SW from N cor. along NW line of lease and survey, thence 157.3 ft. SE at right angles in Thomas Williams Sur.
Drlg. rock 5,064 ft.

Montgomery County

W. C. Battaile's No. 1 Caswell, 2,490 ft. from E line, 150 ft. from S line of survey, David Davis Sur.
S.D. 350 ft.

Chapman and Smith No. 1 Delta Land & Timber Co., 6,388 ft. S and 4,444 ft. E of NW cor. of T. Sheppard Sur. No. A-448.
8¼-in. csg. 297 ft.; T.D. 306 ft.; S.D.

Jack Frazier No. 1 Maxey, 330 ft. S, 330 ft. E of NW cor. of 500-ac. tract of James Brown Sur.
M.I.R.

W. M. S. Thomson's No. 1 Scott, 1,191 ft. SN line, 482 ft. WE line, 1,623 ft. EW line of the F. A. B. Wheeler Sur.
T.D. 3,674 ft.; P.B. to 3,200 ft.; milled out of csg. at 2,190 ft.; drilled to 2,345 ft. and S.D.

Orange County

Blue Line Oil Co. No. 1 J. E. Poet Richard, 900 ft. W of E line and 150 ft. S of N line of most easterly NE cor. of 138-ac. tract, Balleu Sur.
T.D. 2,544 ft., reaming.

Polk County

O. C. Davis et al No. 1 Knox, 1,450 ft. W and 1,930 ft. S of the NE cor. of survey, F. Chairs Sur.
Drlg. shale 2,192 ft.

J. P. Lightfoot et al No. 1 Lynch Davidson, 2,503 ft. SN line of survey and 2,719 ft. W of W line of George Allbritton Sur., or 2,503 ft. SN line and 2,719 ft. WE line of 1,166-ac. tract, Houston County School Land Sur., Abst. No. 270.
10¾-in. csg. 138 ft.; W.O.C.

Refugio County

Cecil Hagen et al No. 1 Edith Clarkson, 1,736 ft. from N line, 3,320 ft. from E line of J. Coughlin Sur.
Location.

Texas Gulf Prod. Co. No. 1 Arnold, 990 ft. from N line, 330 ft. from E line of sec. 23, Bonnieview Subd., Wood Ranch.
S.D. 5,900 ft.

San Jacinto County

Cockburn Oil Co. No. 1 Cruse, 330 ft. from S and E lines of 163-ac. tract, H.&T.C. Sur.
Abd. 5,450 ft.

Cockburn Oil Co. No. 1 Kilburn Moore, 330 ft. from S and E lines of 354.33-ac. tract in J. F. De Runayor Sur.
T.D. 4,717 ft.; fishing.

John Deering et al's No. 1 Randolph, 330 ft. S of center of N line of Tract 7 of the Randolph Sud., V. Flores Sur.
Derrick.

Goldston & Decker No. 1 Randolph, 330 ft. S of center of Lot No. 7, 3,650 ft. NW along line of A. Neal Sur., from S cor., thence 1,600 ft. W at right angles, Vital Flores Sur.
Moving in.

J. E. Hooper et al's No. 1 R. B. Love, 475 S of N line, 3,000 ft. W of E line, 177-ac. tract, Drury McGee Sur.
Abd. 5,749 ft.

Victoria County

Guiberson and Pettit et al No. 1 Wedemeyer, 4,980 ft. SW along NW line of survey from R.R. and 1,129 ft. SE at R/A, J. R. Carbajal Sur., 6 miles NW of Victoria.
Drlg. shale 4,100 ft.

Southern Oil Co. No. 1 Stehle, Pedro Gallardo Sur.
Drlg. shale 2,680 ft.

Walker County

Bradley et al No. 1 Trinity Lumber Co., N 45 deg., E 1,205 ft., N 45 deg., W 400 ft. from S cor. of J. C. Harrison 320-ac. Sur.
Drlg. shale 2,610 ft.

Wharton County

Cockburn Oil Corp. No. 1 Conner, center of SE¼ of NW¼ section 78, E.T.R.R. Survey.
Moving in rig.

Pure Oil Co. No. 1 Paige, 1,397 ft. NE and 467 ft. SE from W cor. of 159.27-ac. lease, James Pirie Sur.
T.D. 7,676 ft.; S.D.

SOUTH LOUISIANA

Beauregard Parish

Richardson & Martin No. 1 Southwest Lbr. Co.
Location.

Calcasieu Parish

Lahay & Lambert et al No. 1 Landry, 1,369 ft. southwesterly from NW cor., 3,600 ft. southwesterly from NE cor. of NW¼ of SE¼ of sec. 23-11s-10w.
Spudded 28 ft. and S.D.

A. G. Oliphant No. 1 Calcasieu National Bank, 289 ft. W, 330 ft. N of SE cor. of SW¼ of sec. 23-19s-12w.
Rig up.

Union Sulphur Co. No. 2 Prairie Farm Land and Canal Co., 330 ft. E and N of SW cor. of NW¼ of NW¼ sec. 3-11s-9w.
Drlg. at 5,672 ft.; 12-in. csg. at 1,377 ft.

Wheeler Oil Corp. No. 1 School Lot, 1,708 ft. E, 1,325 ft. N of SW cor. sec. 16-9s-7w.
S.D. 7,210 ft.

Cameron Parish

Magnolia Pet. Corp. No. 1 Miami Corp., in center of NE¼ of sec. 32-12s-8w, 3 mi. SE of No. 1 Broussard, and 100 ft. from Intra-Coastal Canal.
Set 13-in. csg. at 2,220 ft.; W.O.C.

Steinberger Pet. Co. No. 1 Drew, 330 ft. out of NW cor. NE¼ of Sec. 26-10s-11w.
Location.

Concordia Parish

Zeni Oil Co. No. 1 E. J. Young, 1,200 ft. W of E line, 100 ft. N of S line of SE¼ of SE¼ of sec. 28-6n-8e.
S.D. 510 ft.

Evangeline Parish

Basile Oil Co. No. 1 Haas-Hirsch, 1,650 ft. S, 350 ft. W of NE corner of sec. 14-6s-2w (work over).
T.D. 7,534 ft.; reaming.

J. E. Ladue No. 4 Vidrien, Sec. 34-3-2.
S.D. 1,635 ft.

Sparks-Mitchell and Jacobson's No. 1 Vidrine, 1,114 ft. S, 1,660 ft. W of NE cor. Sec. 47-4s-2e.
S.D. 1,635 ft.

East Feliciana Parish

Thompson Creek Oil Co. No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,589 ft.

West Feliciana Parish

Southern Minerals Corp. No. 1 Mary B. Wood, 1,600 ft. N, 1,600 ft. E of SW cor. of sec. 54-1s-4w.
Drlg. in gumbo at 1,052 ft.

C. L. Thompson No. 1 Percy.
Derrick.

Iberia Parish

Canal Oil Co. No. 1 Bolivar, 954 ft. N, 583 ft. W of W cor. of sec. 2 in sec. 56-12s-7e.
Drlg. in shale 5,850 ft.

Jefferson Lake Oil Co. No. 1 State, Twp. 12s-5e.
T.D. 8,469 ft.; P.B. to 8,464 ft.; preparing to deepen.

Jefferson Lake Oil Co. No. 322 State Lake Pleignour, 234 ft. N and 24 degrees, 15 inches E of No. 25.
T.D. 3,410 ft.; P.B. to 3,000 ft.; to sidetrack.

Kitos Oil Co. No. 2-A Sealey, 1,490 ft. W. 137 ft. S from SE cor. of sec. 56-12s-7e.
Rig up.

Meade Oil Co. No. 1 Hamilton, near town of Lone, in the NW cor. of parish, Sec. 38-12-5.
S.D. 200 ft.

Texas Co. No. 1 State Fausse Point.
D.S. stuck at 6,400 ft.; milling on csg. at 6,044 ft.

Jefferson Davis Parish

J. K. Lewis No. 1 Lockmoore, 150 ft. N and W of SE cor. NW¼ of Sec. 32-7-6.
T.D. 5,710 ft.; T.D. of sidetracked hole 5,510 ft.; drlg. at 5,620 ft.

Shell Pet. Corp. No. 1 Lacassan, 990 ft. N, 1,980 ft. E of SW cor. of Sec. 20-11s-5w.
Coring shale 9,284 ft.

LaFourche Parish

Coastal Oil Co.'s No. 2 Constantine, 1,476 ft. N, 809 ft. E of SW cor. Sec. 36 21-22e.
Location.

Rapides Parish

Foster Oil Co. No. 1 J. F. Hogan, 2,530 ft. S, 330 ft. E of NW cor. of sec. 2-1s-2e.
Derrick.

St. Bernard Parish

Emerald Pet. Corp.'s "Shell Beach Properties" No. 1, on S edge of Bayou Louis Sec. 31-13s-15e.
T.D. 7,385 ft.; hole caved in while S.D. at 5,480 ft.; cemented 7-in. csg. at 5,480 ft.; drlg. shale in new hole at 5,667 ft.

Southern Sulphur Co. No. 1 Lake Borgne, sec. 13s-16e.
S.D. 1,733 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, beginning at SE cor. sec. 5-12s-5e, thence N with E line of section 5,805 ft., thence at R/A with E line of sec. 5,604 ft.
Coring sand 2,765 ft.

St. Martin Parish

Texas Co. No. 1 State Lake, 5,180 ft. E, 350 ft. N of SW cor. of Sec. 10-10s-9e.
Dry and abd. 7,548 ft.

S. C. Yingling et al No. 1 State, 2,957 ft. N and 1,118 ft. W of SE cor. of SE cor. of sec. 13-9s-8w.
Rig up.

S. C. Yingling No. 2 State, 3,066 ft. N and 2,003 ft. W of SE cor. of sec. 13-9s-8w.
Location.

Texas Co. No. 8 St. Martins Land, 3,570 ft. N, 200 ft. W of SE cor. of sec. 17-8s-7e.
Drlg. sand 4,204 ft.

Plaquemines Parish

Southern Sulphur Co. No. 1 Manhattan Fruit Co., 2,100 ft. N, 250 ft. E of SW cor. of sec. 26-21s-30e.
Drlg. in shale at 3,343 ft.

Vermillion Parish

Delcambre & Shelton No. 1 Adam Delcambre, south degrees E, 825 ft. from most northerly cor. of irregular Sec. 63-17-5.
S.D. 2,704 ft.

Vernon Parish

Llano Cooperative Oil Co. No. 3 Llano Del Rio, 1,185 ft. S and 1,000 ft. W of NE cor. of sec. 7-1n-9w.
Drlg. shale 2,627 ft.

Terrebonne Parish

Shell Pet. Corp. No. 1 Realty Operators, 2,000 ft. due S and E cor. of triangular sec. 76, Sur. 103, 17s-17e.
Coring sand 8,831 ft.

Wilkinson County—Mississippi

Charles Green et al No. 1 Foster Creek Lumber Co., center of SE¼ of sec. 8-3n-1e.
S.D. 3,100 ft.; waiting on fuel oil to resume drlg.

E. C. TEXAS WILDCATS

Week Ending February 8

Camp Hill Area—Anderson County

Burke Bros. No. 1 S. G. Moore, 285 ft. from N and 330 ft. from E line of 36.5-ac. tract, J. Rossom Sur.
Location.

Conner Todd No. 1 W. T. Todd, 1,264 ft. W and 294 ft. N line of A. B. Patton Sur., Boggy Creek Field.
S.D. 1,400 ft.

Sun Oil Co. No. 2 Carl Rosson, W. T. Davis Sur., 330 ft. from E line and 466 ft. from N line of tract.
Derrick.

Cayuga Area

Roeser & Pendleton No. 1-B L. R. Billett, 467 ft. from S and E of M. Ellis Sur.
Rigging up.

Long Lake Area—Anderson County

Tide Water & Seaboard O. Co. No. 1 M. J. Reagan in John Adams Sur., 1,150 ft. N and 1,400 ft. E line of 214.8-ac. tract.
Pecan Gap 3,546-3,730 ft.; drlg. 3,120 ft.

Angelina County

Lee-Tex Oil Co. No. 2 Southern Pine Lumber Co. (Guissler), 800 ft. N of No. 1 Guissler, 600 ft. from W line of B. J. Thompson Sur.
S.D. 2,051 ft.; top sand 2,027-37 ft.; to swab; making but little oil.

Morris et al No. 1 Pruyear, cen. 165-ac. tract, Thos. Hank Sur., 7 miles E of Huntington.
S.D. 800 ft.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., center of 160-ac. tract and J. C. Jamison Sur., 6 miles NW of Denison.
Elev. 767 ft.; gas sand 4,441-63 ft.; ran Schlumberger; showed very little porosity; T.D. 4,668 ft.; P.B. to 3,500 ft.; drlg. 3,675 ft.

Port Bolivar O. & R. Co. No. 1 C. Taylor, 330 ft. S and W of 1,543-ac. tract, Fitzhugh Sur., 2¼ miles SE of Gunter.
S.D. 3,930 ft.

Lamar County

Bruce Bros. No. 1 Chas. Price, 300 ft. from S of most southerly SW cor. and 1,000 ft. from W line of Wm. Nelson Sur., 10 miles NE of Paris, 1 mile W of Trout.
S.D. 336 ft.

W. A. Childs et al No. 1 J. M. Johnson, 2,000 ft. from E and 6,600 ft. from S line of Luke Roberts Sur., 1 mile W of Depot.
S.D. 600 ft.

L. W. Dennis No. 1 W. C. Clark, 800 ft. from E and 1,800 ft. from N line of G. H. Hall Sur., 3 miles NE of Reno.
Derrick.

L. W. Dennis, tr., No. 1 Mrs. E. Lawrence, 300 ft. from N and 1,160 ft. from W of T. B. Roundtree Sur., 2 miles NE of Blossom.
Derrick.

North Texas Synd. No. 1 D. M. Haines, 1,800 ft. from E and 3,960 ft. from N line of J. R. Craddock Sur., 2½ miles NW of Emerson.
Derrick.

Limestone County

D. Crawford No. 2 Mary Ward, 400 ft. NE of No. 1, Pedro Varella Sur.
S.D. 2,991 ft.

C. L. Lytle No. 1 J. L. Thompson, 120 ft SE and 200 ft. SW lines of tract in P. Varella Sur., in Mexia field.
S.D. 560 ft.

Money Oil Co. No. 1 Rosson Est., 150 ft. from NE and SE lines of Blk 4, Pedro Varella Sur., in Nigger Creek field.
Rigged up.

Nacogdoches County

Rich et al No. 1 Stripling & Hazelwood, 450 ft. out of NW cor. of 491ac. tract, J. L. Ewing Sur., 15 miles W of Nacogdoches.
Location.

Navarro County

H. Pryor No. 1 Allen Edens, 216 ft. from N and 250 ft. from W of Blk. 17, M. Shire Sur. No. 10., 1 mile NE of Augua.
S.D. 65 ft.

Thompson & Sitton No. 3 Pugh, 325 ft. SW of No. 1 heirs of Joseph Smith Sur, Powell field.
Location.

Rains County

O. L. Greer No. 1 Ida Bullard, N. Brantely Sur., 1,300 ft. from W line and 200 ft. from N line of 25-ac. tract, 2 miles SW of Emory.
S.D. 117 ft.

Red River County

Abercrombie & Harrison No. 1 T. L. McKnight, 1,056 ft. from N and 2,640 ft. from E line in Robert Hill, 12 or 14 miles N of Clarksville.
S.D. 550 ft.

Joe Dinger et al No. 2 Morris, John Guest Sur., approx. 175 ft. NW of No. 1 Morris, 1 mile S Detroit.
T.D. 825 ft.; S.D.

Joiner No. 1 D. Rust, C. C. Wilborn Sur., 234 ft. N and 254 ft. W of most southerly SE cor. of survey, just S of Avery.
Derrick.

Williams et al No. 1 L. and O. Roberts, 462 ft. from S and 792 ft. from E of 200-ac. tract, James Bankston Sur., 2 miles NE of Annona.
S.D. 160 ft.

Rockwall County

W. H. Carlin No. 1 N. F. Lofland, 150 ft. S and W line of 55-ac. tract, ¾ mile W of Rockwall in Bowles Sur.
Location.

Dodd et al No. 1 N. F. Lofland, 2,250 ft. from N and 3,250 ft. from E line of 393-ac. tract, W. H. Beird Sur., 2½ miles SE of Rockwell.
S.D. 750 ft.

Titus County

Howze, Thompson & Peveto No. 1 C. M. Carr, North M. V. Delgado Sur., 2,060 ft. from easterly E line and 1,858 ft. from northerly N line of Sur., 1½ miles E of Talco.
S.D. 4,205 ft.

C. M. Joiner No. 1 Huernish heirs, 1,250 ft. from N and 666 ft. from E line of Henry P. Banks Sur., 12 miles E of Talco.
Derrick.

S. Rotondi No. 1 Lillianstun, 1,300 ft. E from NW cor. of J. Bodt Sur. and 330 ft. N, but in W. H. Crawford Sur., 5 miles NE of Talco.
Elev. 391 ft.; derrick.

Van Zandt County

Mrs. A. Holton No. 2 A. Crim, 155 ft. from N and E lines, Nacogdoches School lands.
Elev. 490 ft.; S.D.

Wood County

Gulf Prod. Co. No. 1 C. D. McCollum, 330 ft. out of NE cor. of 39.6-ac. tract, Jos. Simpkins, ½ mile S of Alba.
Pecan Gap 2,370-3,612 ft.; top Woodbine series 4,381 ft.; top Woodbine 4,402 ft.; drlg. 4,858 ft.

S. W. TEXAS WILDCATS

Week Ending February 8

Atascosa County

R. C. Lee No. 1 Damsch, 160 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. No. 1,222.
Drlg. 1,462 ft.

L. G. McIntyre No. 1 Joint Stock Land Bank Co., 1,104 ft. SW line, 3,700 ft. SE line, Woodlief Sur. 246.
Drlg. 1,955 ft.

L. L. Motes et al No. 1 Atascosa, 1,300 ft. W line, 200 ft. N line, Farm tract No. 79, McNeill Sur.
S.D. 800 ft.

Bee County

Geo. W. Church's No. 1 Hearn, 2,000 ft. S No. 1 Wood.
Perf. 5,898-5,913 ft.; cleaning; some gas and oil.

Geo. M. Church et al No. 1 Ray, 360 ft. E line, 330 ft. N line, C 40-ac. tract, Anna Burk Sur.
T.D. 692 ft.; S.D.; drlg. wtr. well.

Dirks Bros. No. 1 Scott, 1,190 ft. SW cor., Juan Molina Sur., Uranga grant.
Drlg. 1,712 ft.

H. A. Pressey No. 1 Hicks, 1,450 ft. of S line, 150 ft. of W line, lease, J. Uranga Grant.
M.I.M.

G. M. Richardson No. 1 Mengers, center 500-ac. tract, Ryan estate, William Allen Sur.
Derrick.

Bexar County

J. Dupree No. 1 Coffey, Rodrigues Sur.
Drlg. 1,211 ft.

Joe Dupree No. 1 Russell, 1,500 ft. SE No. 1 Coffey.
T.D. 1,001 ft.; acid treating.

H. J. Moore No. 1 Eisenhaus, 507 ft. N line, 1,113 ft. E line tract, Roderiguez Sur.
S.D. 370 ft.

H. A. Pagenkopf No. 1 Ritteman, 2,500 ft. E line, 500 ft. N line, C. Texada Sur.
Drlg. 1,471 ft.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lease, B. Garcia tract, Salinas Sur.
Fishing 3,262 ft.

Dick Young No. 1 Singer, 50 ft. E line, 660 ft. N line, NW¼ SE¼, Sur. 312.
Coring 712 ft.

Dewitt County

Hill Bros. & Koontz No. 1 Herman Riddle, 450 ft. S line, 330 ft. W line, 535-ac. tract, Santos Sur.
Drlg. 345 ft.

Reginald F. Baurke No. 1 W. C. Steinman Est., 937 ft. from N and S lines, Uriah Blue 1-3 League.
To resume drilling; T.D. 2,412 ft.

Universal Oil, Gas & Mining Co. No. 1 Schuebel, 330 ft. from S and W lines of tract, Fitzgerald grant.
Drlg. 670 ft.

Duval County

J. H. Chandler's No. 3 Rita Pena, Share 4 Mesquite grant.
Set csg. 2,832 ft.; standing.

Continental Oil Co. No. 8-A Driscoll, sec. 52, Santa Rosalie grant.
Rigging up.

Chas. Daubert No. 1 Kreis, 2,600 ft. N line, 2,700 ft. E line, Sur. 518.
Drlg. 1,431 ft.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250.
Sand 2,299-2,316 ft.; tested S.W.; drlg. 3,345 ft.

Howard Pet. Co. No. 1 Ruiz, Sur. 12.
Location.

Magnolia Pet. Co. No. 1 Bennett, 330 ft. S and E lines, Sur. 434.
Coring 3,814 ft.

Porter & Blanchard No. 1 Milano Land & Garden Co., 330 ft. N and W lines, Sur. 85.
Drlg. 201 ft.

Rogers & Rogers No. 1 Cuellar, 330 ft. NE line, 990 ft. NW line, sec. 117.
Recementing 2,871 ft.

Santa Clara Oil Co. (Atkins & O'Neil) No. 1 Glasscock, 3,945 ft. E line, 9,085 ft. S line, Book ranch, Concepcion grant.
Drlg. 2,350 ft.

Santa Clara Oil Co.'s (Atkins & O'Neil) No. 1-A James F. Welder Heirs, 330 ft. SW cor. 640-ac. tr. lying W of sec. 525, in sec. 103.
Loma Novia sand 2,915-20 ft.; D.S.T. 7 min., 185 ft.; pipe line oil; preparing to production test.

Edwards County

Paul Teas No. 1 Stewart, C SE¼ sec. 2, G.C.&S.F. Sur.
T.D. 1,926 ft.; rigging up.

Frio County

Amerada Pet. Corp. No. 1 Correy & MacWilliams, 660 ft. N line, 125 ft. E line, Blk. 13, Jose Arocha Sur. No. 298.
Drlg. 5,324 ft.

W. D. Bacon's No. 1 Burns, 2,500 ft. S and W line, Thomas Clifton Sur.
T.D. 3,008 ft.; S.D.

Goliad County

Diamond Half Oil Co. No. 2 Gillette, 990 ft. SW line, 330 ft. NW line, lease, J. Gomez Sur.
Location.

Thompson Drlg. Co.'s No. 1 Hays Taylor estate, 900 ft. SE line, 2,400 ft. W cor. 791-ac. tract, Smith Sur.
T.D. 5,301 ft.; dry and abandoned.

Zeni Oil Co. No. 1 Lutenbacher, 330 ft. N and W lines, Blk. 25, Goliad townsite.
Spudded in.

Guadalupe County

Paul Armstrong and J. E. Clark No. 1 Brodnoux, 150 ft. S and E lines, 36-ac. tract, W. P. King Sur.
Drlg. 1,457 ft.

Clark & Gay No. 1 Waldrip, Staples townsite, Geo. Allen Sur.
Spudded in.

O. W. Killam No. 1 Renecker, 150 ft. NW and NE lines, G. Chatwell Sur.
Drlg. 1,256 ft.

Ace Locke No. 1 Holmes, 30-ac. tract, Cyrus Campbell Survey.
Drlg. 535 ft.

R. C. Robbins' No. 1 Manford, 1,200 ft. E line, 750 ft. S line, 100-ac. tr., Hodges ¾ league.
T.D. 2,608 ft.; bailing some oil.

Fred Scott No. 1 Dunavent, Wm. Pettus Survey.
Drlg. 153 ft.

Fred Scott No. 1 Shultz, Ed. Pettus Sur.
W.O.C. 185 ft.

H. P. Suggs No. 1 Sherrill, 2 miles E Staples.
No report.

Hidalgo County

Gerald Oil & Gas Co. No. 1 Nelson Mortgage Co., Blk. 38, Lot A, La Donna tract.
Spudded in.

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 70, Las Mestanas grant.
Tentative location.

Gulf States Oil Co. No. 1 Delta Orchards, 580 ft. from N line, 400 ft. W line, Lot 2, Blk. 73, Las Mestanas grant.
Resumed drlg. 1,350 ft.

Maddox & Tatum No. 1 John Shary, Tr. 48-2, Porc. 52, jurisdiction of Reynosa.
Rigging up.

Maxwell's No. 1 Hidalgo Water Dist. No. 3, Lot 11, Blk. 20, Alamo Land & Sugar Co. Subd., Alamo tract, 10 miles SW McAllen.
Standing 721 ft.

Quintana Petroleum Co. No. 1 John C. Engleman, Lot 10, Blk. 94, Las Mestanas Grant.
Drlg. 423 ft.

Sloan et al No. 1 Brock & Showers, 250 ft. S and W lines, Lot 9, Blk. 16, Por. 80.
T.D. 6,002 ft.; P.B. to 4,300 ft. to perforate and swab.

Jim Hogg County

French Oil Corp.'s No. 1 E. Rodrigues, Share M-1, partition, Las Cuevitas grant
Drlg. 2,665 ft.

S. L. Miller Oil Co. No. 1 Yeager, 150 ft. E line, 477 ft. S line, Blk. 6, Sur. 20.
T.D. 3,542 ft.; P.B. to 2,535 ft.; W.O.C.

P. H. Neilson, trustee No. 1 de la Garza, 580 ft. E line, 600 ft. S line, Blk. 393, Pippin Subd., Randado grant.
S.D. for water 610 ft.

Rankins No. 1 Vela, Lot 6, Sur. 5.
T.D. 1,911 ft.; fishing.

Jim Wells County

Houston Oil Co. No. 1 Hawkins & Wallace, 990 ft. S and E lines, Blk. 11.
No report.

O. W. Killam No. 1 Reynolds, C S half Sur. 26.
Rigging up.

H. Modes No. 1 B. W. Owens, 620 ft. N line, midway E and W lines tract, Poitevent Sur. 151.
Derrick.

G. M. Richardson No. 1 Garrett, 1,980 ft. S line, 1,640 ft. E line, sec. 5, N. G. Collins grant.
Derrick.

Kerr County

Auld and Evans' No. 1 Heffner, 660 ft. N line, 330 ft. E line, Sec. 13, B.S.&F. Sur.
T.D. 1,387 ft.; S.D.

Eastland Oil Co. No. 7 Love, 660 ft. N Evans & Gant No. 1 Love, Martines Sur. No. 1,594.
Drlg. 567 ft.

Evans & Edmiston's No. 1 Will Auld, 2,500 ft. SE No. 1 Love, 150 ft. S line lease, sec. 1,592.
Rigged up.

Kleberg County

J. W. Anderson No. 1 Kellam, 330 ft. S and E lines, Lot 7, Blk. 53, K.T.&I. Sur.
Derrick.

John Bartlett's No. 1 Anton Deitz, SE¼ SE¼ Sec. 48, K.T.&I. Subd.
No report.

Clarke No. 1 Kellam, 330 ft. S and W lines, Blk. 5, sec. 53, K.T.&I. Sur.
Derrick.

Live Oak County

Dirks Bros. No. 1 Dougherty, 330 ft. NW line, 960 ft. NE line, 320-ac. tract, Beagle Sur.
Moving in material.

R. H. Feltner No. 1 J. T. Carter, Sur. 319.
Spudded in.

Holland Oil Co. and Maraydun Oil Co. No.

1 Lyne, 1,198 ft. SE line, 3,956 ft. SW line, sec. 74, Lyne, Abst. 768.
S.D. 4,390 ft.

Santa Clara Oil Co.'s (Atkins & O'Neil) No. 1 Corbett, sec. 3, R. H. Corbett Sur. Drlg. 3,414 ft.

L. W. Steiren No. 1 Smith, T. B. Reese Sur.
Rigged up.

McMullen County

Aransas Oil Co.'s No. 1 Reed, 330 ft. E line, 1,320 ft. S line, Spicer Sur.
T.D. 1,680 ft.; S.D.

F. Duyvault No. 1 Matula, 150 ft. S line, 2,462 ft. E line, lease, Jas. Garner Sur. Set csg. on sand 730-60 ft.; standing.

Magnolia Pet. Co. No. 1 Kincaid, 2,310 ft. W line, 330 ft. N line, Sur. 86.
Derrick.

Stewart et al's No. 1 G. Lowe, 2,000 ft. W line, 2,400 ft. S line, Geo. Bright Sur. No. 21.
T.D. 2,249 ft.; S.D.

Whisenant & Trenchard No. 1 Ross Bros., C SE¼ SE, Sur. 93.
Drlg. 322 ft.

Medina County

F. Brown's No. 1 Brucks, 960 ft. W line, 660 ft. S line, Brucks tract, John Ward Sur. No. 18.
Standing 560 ft.

Frank Brown's No. 2 Winn, 660 ft. W line, 300 ft. N line, Ward Sur.
Spudded in; S.D.

W. C. Campbell's No. 1 McMenemy, 160 ft. S and W lines, Sur. 33.
T.D. 2,892 ft.; P.B. to run casing.

San Patricio County

H. Reid et al No. 1 Svedlenak, 330 ft. N and W lines, Lot 1, sec. 5.
Rigging up.

Stanolind O. & G. Co. No. 1 Alamo Iron Works, 1,320 ft. N line, 330 ft. E line, Blk. 17, Fitzsimmons League.
T.D. 6,675 ft.; dry and abandoned.

Stanolind Oil & Gas Co. No. 1 Floerke, Blk. 17.
Drlg. 1,950 ft.

Texon Drlg. Co. No. 1 Rambo, 330 ft. W line, 465 ft. N line, Lot 6, sec. 35.
Moving in material.

Willis Storm No. 2 Hobbs, Delgado Sur.
Location.

Starr County

O. C. Borah No. 1 Virginia C. de Guerra, 2,500 ft. N line, 2,000 ft. E line, Share 92, Por. 68, Jurisdiction of Mier.
Drlg. 263 ft.

J. H. Clopton No. 1 Kelsey Bass, center Sec. 357.
Drlg. 1,911 ft.

J. H. Clopton No. 2 Kelsey Bass, sec. 377.
Location.

Coreta Oil Co. No. 1 Haden et al, Share 47, Por. 80, Jurisdiction of Camargo.
Reported in sand 1,350-1,450 ft.

H. C. Harter & Mayhew No. 3 Sanchez, 739 ft. N line, 1,112 ft. W line, Share 69, Por. 72, Jurisdiction of Mier.
S.D. 500 ft.

A. F. Vairnoy No. 1 Garza, 5,130 ft. N line, 1,320 ft. W line, Share 26, Por. 70, Jurisdiction of Mier.
S.D. 887 ft.

McCurry & Yates No. 2 S.C.C.C., 150 ft. E line, 510 ft. N line, Blk. 68, Por. 89.
Location.

Federal Oil Co. No. 1 Hicks et al, 187 ft. from NW line, 313 ft. from NE line of Blk. 6, Federal grant.
T.D. 2,210 ft.; S.D.

A. J. Weyel, tr. No. 1 Wood, 2,500 ft. N Rio Grande River, 2,500 ft. E line, Por. 54.
Flowing gas and salt water; trying to kill; T.D. 2,040 ft.; mudding off.

Webb County

Austin & Vernon's No. 1 Jeffries, 150 ft. NE line, 1,170 ft. SE line, Blk. 18, Sur. L.455.
Drlg. 988 ft.

Clopton & Doffing's No. 1 Sistar, center Blk. 29, Borrego grant.
Fishing 2,035 ft.

O. W. Killam No. 1-A Ortiz, 50 ft. N No. 1 Ortiz.
T.D. 2,318 ft.; dry and abandoned.

La-Texas Oil Co. No. 1 L.B.C.C., Por. 12.
Standing 2,664 ft.

Mills Bennett Prod. Co. No. 1 Guerra, 330 ft. S and E lines, S½, W½, Sur. 709.
Drlg. 2,330 ft.

Arthur H. Wray No. 1 Geo. Stuempke, Share 1, Brewster pasture, Galan grant.
Cleaning hole; T.D. 1,675 ft.

S. S. & B. Oil Co.'s No. 6 Lone Star Co., 1,700 ft. NE line, 330 ft. SE line, Por. 12.
Testing sand 454-459 ft.; T.D. 1,010 ft.

Willacy County

Kingwood Oil Co.'s No. 1 Santa Rosa, Inc., 100 ft. from E line, 687 ft. from S line of Sec. 30, Blk. 16, Share 44, San Juan de Carricitas grant.
P.B. 4,900 ft.; to perforate 4,354-67 ft.

Zavalla County

W. L. Bridges No. 1 Price & Flowers, 1,320 ft. N and W lines, Blk. 1, sec. 19, I.G.N. Ry. Sur.
Location.

Buttram Pet. Co. No. 1 White Cotton, 2,340 ft. W line, 330 ft. N line, A.B.&M. Sur. No. 1.
Derrick.

Lease Oil Co. and Witherspoon Oil Co. No. 1 George West, 2,665 ft. N line, 330 ft. E line, C. Bustillo Sur. No. 1.
Rigging up.

Zapata County

Hurt Cullinan No. 1 Gutierrez, Blk. 4, Share 2, Fansler Partition, Comitas grant.
Drlg. 1,918 ft.

J. J. O'Hern's No. 1 Raymond, 330 ft. NW line, 330 ft. NE line, Blk. 5, Share 8, Por. 37.
Coring 2,256 ft.

S. W. TEXAS PROVEN

Week Ending February 8

Caesar—Bee County

Luling Oil & Gas Co. No. 6 Miller, 130 ft. S line, 580 ft. E line, 100-ac. tract, Franklin Lewis Sur.
Drlg. 1,015 ft.

Rual Swiger No. 5 Gardner, 150 ft. E line, 450 ft. SE line, 105-ac. tract, F. Lewis Sur.
Sand 3,022-31 ft.; comp.; jetting est. 1 bbl. per hr.

Dirks—Bee County

Illinois Pet. Co. No. 7 Hall, 500 ft. W line, 1,650 ft. SW line, T. J. Butler Sur.
Sand 3,904-16½ ft.; comp.; 640 bbls. per day.

Illinois Pet. Co. No. 1-B Hall, 660 ft. SW and NW lines, lease, Butler Sur.
Moving in material.

Illinois Pet. Co. No. 3 Rapp, 330 ft. N line, 66-ac. tract, 660 ft. W No. 2 Rapp, C. A. Dugat Sur.
Location.

Sun Oil Co. No. 5 Page, 330 ft. NE cor. tract, Young Sur., Abst. No. 588.
Rigging up.

Texas Co. No. 24 Young, T. J. Butler Sur.
Comp.; 17 bbls. per hr. on ¼-in. choke; T.D. 2,828 ft.

Eckart—Bexar County

Alamo Nat. Gas Co. No. 1 Minnie Coreth, Sur. 49.
Drlg. 1,052 ft.

Eckert & Sons No. 10 Brenham, 500 ft. E No. 9, P. L. Buquar Sur.
Location.

Charamousca—Duval County

Sun Oil Co. No. 3 Worden-Draught, 2,160 ft. of E line, 1,660 ft. of N line, Sur. 151.
Drlg. 833 ft.

Eagle Hill—Duval County

Marso Oil Co. No. 2 Hagist, 480 ft. E of No. 1, Survey 6.
Testing 2,122 ft.

W. C. McBride No. 1 Hagist, 330 ft. S and W lines, Blk. 13, sec. 367.
Top Cole sand 1,640 ft.; drlg. 1,645 ft.

Government Wells Pool—Duval County

Tom Graham No. 3 Webb, 330 ft. E line, 1,320 ft. N line, 68½-ac. tract, Sur. 41.
T.D. 2,758 ft.; W.O.C.

Magnolia Pet. Co. No. 4 Leffler, Sur. 47.
Sand 2,268-79 ft.; gas; coring 2,283 ft.

Hoffman—Duval County

Rodney DeLange No. 1 B.C.C., Sur. 76.
Rigging up.

Duval Oil Corp. No. 1 D. Ruiz, 330 ft. N line, 990 ft. E line, Sur. 119.
Rigging up.

Rogers & Rogers Drlg. Co. No. 2 Hoffman, 330 ft. E line, 1,698.5 ft. S line, 640-ac. tract, Sur. 118.
Location.

Loma Novia—Duval County

Bridwell Oil Co. No. 10 B.C.C., 990 ft. of N line, 330 ft. of W line, S½, Sur. 76.
Comp.; no gauge; sand 2,566-91 ft.

Bridwell Oil Co. No. 3 Brodbeck, 330 ft. of S and W lines, NW¼, NW¼, Sur. 76.
Comp.; no gauge; T.D. 2,572 ft.

Bridwell Oil Co. No. 5 B.C.C., S½, Sur. 76.
Drlg. 420 ft.

Bridwell Oil Co. No. 1-C Hubbard, 330 ft. S and E lines, NE¼ SW¼, Sur. 75.
Rigging up.

Rodney DeLange No. 7 B.C.C., 330 ft. N and E lines, SE¼, Sur. 76.
T.D. 2,746 ft.; comp. 12 bbls. per hr.

Rodney DeLange No. 8 B.C.C., SE¼, Sur. 76.
Rigging up.

Duval Oil Corp. No. 4-B Moody, 330 ft. S line, 990 ft. E line, S½, NW¼, Sur. 76.
Sand 2,591-2,615 ft.; comp.; no gauge; T.D. 2,617 ft.

Eastern Texas Pet. Co. No. 3 Hubbard, 330 ft. N line, 990 ft. W line, SW¼, Sur. 71.
Drlg. 2,437 ft.

Frank Gravis No. 5 Byland, 330 ft. N and E lines, Blk. 3, Sur. 78.
Drlg. 2,263 ft.

C. Hamil No. 2-B Hahl, Sur. 63.
Testing; sand 2,633-43 ft.

C. Hamil No. 3-C Hahl, sec. 63.
Sand 2,598-2,626 ft.; comp.; 25 bbls. per hr. on ¾-in. choke; T.D. 2,636 ft.

C. Hamil No. 4-C Hahl, 330 ft. N and E lines, SE¼, Sur. 63.
Drlg. 2,569 ft.

C. Hamil et al No. 3-D Hahl, Sur. 76.
Sand 2,633-43 ft.; testing.

Hamil, Smith & Ogden No. 13 Hubbard, 330 ft. N and E lines, NE¼ SE¼ sec. 77.
Derrick.

Hamil, Smith & Ogden No. 17 Hubbard, 330 ft. SW cor., SE¼, SW¼, Sur. 77.
Sand 2,654-92 ft.; testing.

Highland Oil Co. No. 6 Hubbard, Sur. 75.
Sand 2,554-72 ft.; comp.; 20 bbls. per hr. on ½-in. choke.

Highland Oil Co. No. 9 Hubbard, S½, Sur. 72.
Abd. location.

Highland Oil Co. No. 23 Hubbard, 990 ft. NE cor. W½, Sur. 72.
Drlg. 2,617 ft.

Highland Oil Co. No. 26 Hubbard, Sur. 72.
Drlg. 2,023 ft.

Humble Oil & Ref. Co. No. 5 Vela, 2,360 ft. E line, 330 ft. S line, N½, Survey 42.
Comp.; 29.37 bbls. per hr. on ¼-in. choke; T.D. 2,680 ft.

Humble O. & R. Co. No. 7-A Hubbard, 990 ft. W line, 1,650 ft. S line, sec. 84.
Moving in rig.

Humble O. & R. Co. No. 2-B Hubbard, 330 ft. N line, 990 ft. W line, Sec. 83.
Drlg. shale 2,740 ft.

Humble O. & R. Co. No. 6 Vela, 330 ft. S line, 3,020 ft. E line, N½, Sur. 42.
Drlg. sandy shale 1,713 ft.

Magnolia Pet. Co. No. 3 Hahl, 1,650 ft. N line, 330 ft. W line, Sur. 67.
Rigging up.

Magnolia Pet. Co. No. 13 Hahl, 640-ac. tract, Sur. 67.
T.D. 2,583 ft.; pulling liner to core deeper.

Magnolia Pet. Co. No. 21 Hahl, 990 ft. E line, 330 ft. S line, Sur. 67.
Sand 2,666-78 ft.; drlg. pluga.

Montour Prod. Co. No. 4 Hubbard, Sur. 75.
Testing 2,606-25 ft.

Pitkin & Goldston No. 1 B.C.C., 330 ft. N and E lines, tract, Sur. 57.
Rigging up.

Reynosa Oil Co. No. 1 McLean, 330 ft. N and E lines, S½, SE¼, Sur. 62.
Comp.; 32 bbls. per hr.; open tubing; C.P. 300 lbs.; T.D. 2,580 ft.

Reynosa Oil Co. No. 2-A McLean, 990 ft. E line, 330 ft. S line, lease, Sur. 62.
Drlg. 2,011 ft.

Rosan Oil Co. No. 7 Hubbard, Sur. 84.
Comp.; 75 bbls. per hr. on ½-in. choke; T.D. 2,802 ft.

Russ Pet. Co. No. 1 Hahl, 330 ft. S & E lines, SW¼, Sur. 63.
Drlg. 2,016 ft.

Shell Pet. Corp. No. 3 Hahl, 990 ft. E line, 330 ft. S line, Sur. 74.
Set csg. 2,572 ft.; W.O.C.

Shell Pet. Corp. No. 20 Hubbard, 330 ft. S and E lines, lease, Sur. 77.
Derrick and pits completed.

Shell Pet. Corp. No. 23 Hubbard, 330 ft. S & W lines, Sur. 77.
T.D. shale 2,713 ft.; running tubing; swabbing.

Texas Co. No. 9 B.C.C., N¼, Sur. 59.
T.D. 2,565 ft.; W.O. pump.

Texas Co. No. 10 B.C.C., 660 ft. N No. 9, sec. 59.
Drlg. 2,100 ft.

Texas Co. No. 15 Wendt, 330 ft. S line, 4,950 ft. W line, 458-ac. tract, sec. 68.
T.D. 2,791 ft.; W.O. pump.

Texas Co. No. 16 Wendt, 854 ft. E line, 330 ft. S line, lease, Sur. 68.
Drlg. sand and gravel 613 ft.

Texas Co. No. 19 Wendt, 330 ft. N line, 3,020 ft. W line, Sur. 68.
Sand 2,650-88 ft.; coring deeper.

Texas Co. No. 21 Vela, Sur. 42.
Set csg. 2,710 ft.; running tubing.

Texas Co. No. 22 Vela, S½, Sur. 42.
Testing 2,720 ft.

Texas Co. No. 23 Vela, S½, Sur. 42.
Drlg. 1,112 ft.

Texas Co. No. 32 Vela, Sur. 42.
Rigging up.

Valley Osage Oil Co. No. 1 Moody, N½, SE¼, Sur. 60.
Drlg. 2,021 ft.

Valley Osage Oil Co. No. 1 Hubbard, W½, Sur. 75.
Drlg. 531 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 5 D.C.R.C., 1,650 ft. E line, 330 ft. S line, Sur. 100.
Sand 1,324-31 ft.; comp.; gasser, 20,000,000 ft.; rock pressure 520 lbs.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 10-A Welder, 990 ft. E line, 330 ft. N line, Sur. 385.
Comp.; 7½ bbls. per hr. on ¼-in. choke; sand 2,210-25 ft.

Atlantic Oil Prod. Co. No. 11-A Welder, Sur. 385.
Drlg. 511 ft.

Atlantic Oil Prod. Co. No. 4-B Welder, 330 ft. S and W lines, S½ SE¼, Sur. 385.
P.B. to 2,234 ft.; tested salt water; S.D. for orders.

Atlantic Oil Prod. Co. No. 5-B Welder, 990 ft. N & W lines, lease, SW½, SE¼, Sur. 385.
Sand 2,487-97 ft.; tested 2,000 ft. in 10 min.; set csg.; W.O.C.

Atlantic Oil Prod. Co. No. 1-C Welder, 2,310 ft. W line, 330 ft. N line, Sur. 591.
Rigging up.

Atlantic Oil Prod. Co. No. 3-C Welder, 126-ac. tract, Sur. 591.
Comp.; 15 bbls. per hr. on ¼-in. choke; T.D. 2,485 ft.

Atlantic Oil Prod. Co. No. 4-C Welder, 126-ac. tract, Sur. 591.
Drlg. shale and sand 2,193 ft.

Buchanan & Blanco Oil Co. No. 8 Wood-Welder, 330 ft. S and W lines, E½, SW¼, Survey 385.
Comp.; 22 bbls. per hr. on ¼-in. choke; sand 2,510-24 ft.

Buchanan & Blanco Oil Co. No. 9 Wood-Welder, 330 ft. E line, 405 ft. S line, E½, SW¼, Sur. 385.
Comp.; 31 bbls. per hr. on ¼-in. choke.

Harvey-Henderson-Dulce No. 1-A Chernosky, 1,152 ft. W line, 360 ft. S line, Sur. 226.
Sand 2,320-29 ft.; tested S.W.; P.B. to 2,223 ft.; testing.

Humble O. & R. Co. No. 1 Wright, 330 ft. S and E lines, SE¼, Sur. 118.
Location.

Humble O. & R. Co. No. 6 T. D. Smith, 2,900 ft. N line, 330 ft. E line, Sur. 382.
Set csg. on sand 2,486 ft.; W.O.C.

Humble O. & R. Co. No. 5-A Serna, 1,650 ft. W line, 330 ft. N line, SW¼, sec. 384, Location.

Humble O. & R. Co. No. 3-B Serna, S½, SE¼, Sur. 384.
Sand 2,186-90 ft.; comp.; 29.37 bbls. per hr. on ¼-in. choke; T.D. 2,498 ft.

Humble O. & R. Co. No. 4-B Serna, 990 ft. E line, 330 ft. S line, S½, SE¼, Sur. 384.
Drlg. shale and lime 1,975 ft.

Mid-Continent Pet. Corp. No. 6 Serna, S½, N½, Sur. 384.
Sand 2,491-99 ft.; comp.; no gauge; T.D. 2,499 ft.

Pan American Pet. Co. No. 1-A Welder, 330 ft. E line, 990 ft. S line, Sur. 381.
Location.

Pan American Oil Co. No. 3-A Welder, Sur. 381.
Drlg. 2,350 ft.

Richardson & Kleiner's No. 1 Welder, 990 ft. E line, 330 ft. S line, S½, NE¼, Sur. 381.
Drlg. 1,480 ft.

Santa Clara Oil Co. (Atkins & O'Neil) and H. H. Henderson No. 5 C. Wood-Welder, NE of 160-ac. tract, Sur. 383.
Comp.; 18 bbls. per hr.; ¼-in. choke; sand 2,407-23 ft.

Santa Clara Oil Co. No. 8 Welder, 660 ft. S No. 4, survey, W½ SW¼, Sur. 385.
Derrick.

Santa Clara Oil Co. No. 17 Welder, 660 ft. W No. 4, 330 ft. N and E lines, Sur. 383.
Drlg. 1,942 ft.

Santa Clara Oil Co. and H. H. Henderson No. 8-C Welder, 2,310 ft. S and E lines, Sur. 381.
Rigging up.

Shell Pet. Corp. No. 3 Welder, 660 ft. S No. 2, W½, SW¼, Sur. 385.
Comp.; 12 bbls. per day on 5/16-in. choke; shut in for potential test.

Westheimer & Daube No. 3 Z. Campos, 990 ft. of W line, 330 ft. of S line, Sur. 224.
Comp.; 60 bbls. per hr. on ½-in. choke; T.P. 200 lbs.; C.P. 700 lbs.; T.D. 2,-233 ft.

Pearsall—Frio County

T. Davis No. 1 Halff & Oppenheimer, 329-ac. tract, J. D. Clare Sur. 366½.
Drlg. 3,992 ft.

Amerada Pet. Co. No. 5 Halff & Oppenheimer, 930 ft. N No. 1 Michail, Simon Glenn Sur. No. 235.
Drlg. 3,311 ft.

Amerada Pet. Co. No. 6 Halff & Oppenheimer, S. A. Ditch Co. Sur. No. 1,103.
Drlg. 3,208 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1, Farm tract 2309, Blk. 59.
Drlg. 7,163 ft.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines, Tract 2,120, Blk. 87.
Drlg. 792 ft.

Samfordyce—Hidalgo County

J. H. Anderson's No. 1 Guerra, 333 ft. N line, 285 ft. W line, Tract 254, Por. 38.
Drlg. 932 ft.

J. T. Barlow No. 1 Marta Flores de Chapa, 230 ft. W line, 692 ft. S line, Tract 250, Porc. 39.
Drlg. 343 ft.

Ralph E. Fair, Inc.'s (Kingwood) No. 4 Guerra, 165 ft. S line, 1,150 ft. E line, Share 12, Por. 41.
Location.

Ralph E. Fair No. 1-B Seabury, 230 ft. S and W lines, tract, Tract 256, Por. 38.
Moving in material.

Harrison, Davis & Bishop No. 1 Guerra, 230 ft. S line, 616 ft. W line, S 40-ac., Tract 12, Por. 41.
Moving in material.

Harrison-Davis-Bishop's No. 9 Guerra, 330 ft. N and W lines, 40-ac. tract, Tract 11, Por. 41.
Drlg. 472 ft.

W. F. Lacey No. 1 Felipe Farias heirs, W 10-ac. tract, Tract 255, Por. 39.
T.D. 2,360 ft.; dry and abd.

W. F. Lacey No. 1 Lula George, 75 ft. S and W lines, 5-ac. tract, Tract 13, Por. 41.
Location.

W. F. Lacey No. 2 Lula George, 75 ft. S and W lines, 10-ac. tract, Tract 13, Por. 41.
Location.

W. F. Lacey No. 3 Lula George, 75 ft. S line, 550 ft. W line, 10-ac. tract, Tract 13, Por. 41.
Location.

Navarro Oil Co. No. 2 Guerra, 230 ft. S & W lines, lease, Tract 12, Porcion 41.
Sand 1,826-42 ft.; D.S. test 127 ft. oil and 20 ft. wtr. in 15 min.

Weekly Oil Co. No. 4 Francisco Guerra, Tr. 12, Porc. 41.
Sand 2,732-2,801 ft.; comp.; 50 bbls. oil per day on ¼-in. choke.

Sandia—Jim Wells County

J. E. Walsh No. 1 Wade, 700 ft. N line, 330 ft. E line, Lot 3, Blk. C, Lopez de Jean Grant.
Set csg. 2,931 ft.; standing.

N. Pettus—Karnes County

Magnolia Pet. Co. No. 12 Porter, 660 ft. N. No. 7, 660 ft. W No. 11, Martinez Sur.
Set csg. 3,651 ft.; W.O.C.

Kingsville—Kleberg County

Fidelity & Culbertson Exploration Co.'s No. 2 Henry, Lot 2, Blk. 49.
Location.

Dinero—Live Oak County

Houston Oil Co. No. 33 Cartwright, 1,173 ft. N No. 21, Francis Botello grant.
Rigging up.

McNeill—Live Oak County

Bence Oil Corp.'s No. 1 E. Mahoney, 155 ft. from NW line of J. H. Harvey tract, 3,109 ft. SW of highway in Mark Killelly Sur.
S.D. 78 ft.

Luray Oil Co.'s No. 1 Little, NE offset, Whittington's No. 3 Little, M. M. Shipp Sur.
T.D. 5,302 ft.; dry and abd.

J. O. Whittington's No. 4 Little, 990 ft S and E lines, Shipp Sur.
Location.

Cullham—McMullen County

Chas. Hall No. 2 Claunch, 400 ft. SE No. 1, Holy Sur.
Skidding on.

Luray Oil Co. No. 1 Garner, 150 ft. S Frio River, Jas. Garner Tract.
Location.

Luray Oil Co No. 8 Glass, 400 ft. S No. 7, 475 ft. NE No. 1, J. Gardner Sur.
P.B. to 700 ft.; W.O.C.

I. W. Taylor No. 1 Lark, 150 ft. S, NW cor. Blk. 56, Scrugham Sur. 975.
Sand 969-77 ft.; running tubing.

Witherspoon Oil Co. No. 1 Cullham, 160 ft. W line, 330 ft. S line, M. Holy Sur.
Location abd.

Jacob-McMullen County

Loma Oil Co. No. 1-F Jacob, 330 ft. W No. 1-B Lark.
Spudded in.

Baldwin—Nueces County

Magnolia Pet. Co. No. 8 Baldwin, 660 ft. S of No. 1 Baldwin.
Sand 3,875-79 ft.; D.S. test 1,200 ft. oil, 150 ft. mud in 10 min.; set csg. 3,875 ft.; W.O.C.

Saxet Heights—Nueces County

Circle Oil Co. No. 1 Whelan, 330 ft. S and E lines tract, Villareal Sur.
Derrick.

J. K. Culton No. 3 Baldwin, Blk. 20, Villareal Grant.
Spudded in.

J. K. Culton No. 2 Whelan, 330 ft. E line, 990 ft. S line, 60-ac. tract, Villareal Sur.
Comp.; 830 bbls. per day on ¼-in. choke.

J. K. Culton No. 4 Whelan, 330 ft. N and E lines, tract, Villareal Sur.
Skidding on.

Garland Clymore No. 1 Weil, 330 ft. NW and NE lines, 80-ac. tract.
Drig. 4,165 ft.

Tom Graham No. 1 Sam Kaler, 150 ft S and E lines, 10-ac. tract, Villareal Sur
Comp.; 130 bbls. per day on 3/16-in. choke; T.D. 4,062 ft.

Tom Graham No. 1 Whelan, 330 ft. N and E lines, 40-ac. tract, Villareal Sur.
Moving in material.

D. P. Hawn No. 1 William Shely, 9-ac. tract, Oak Park Addn.
Rigging up.

Heep Oil Corp. No. 1 Robinson, 50.16-ac. tract, Villareal Survey.
Sand 4,083-91 ft.; comp.; 8 bbls. per hr. on ¼-in. choke; T.P. 4,096 ft.

Heep Oil Corp. No. 2 Robinson, 660 ft. S No. 1, Villareal Sur.
Set surface csg. 510 ft.; W.O.C.

Marine Oil Corp. No. 1 Lynch, 330 ft. S line, midway E and W lines, tract, Villareal Survey.
T.D. 4,093 ft.; drig. plugs.

Maryland O. & G. Co. No. 1 Winship, C Lot 3.
Derrick.

W. D. Moore No. 1 Lackey, 250 ft. SW line, midway SE and NW lines, tract, Villareal Sur.
Moving in material.

Hiram Reed No. 1 Scheffield & Hutchins, center 2-ac. tract.
Moving in material.

Republic Nat. Gas Co. No. 2 Baldwin, 81.6-ac. tract, Blk. 20, Villareal Sur.
Drig. 3,745 ft.

Republican Natural Gas Co. No. 3 Baldwin, 81.6-ac. tract, Blk. 20, Villareal Sur.
T.D. 500 ft.; W.O.C.

Southern Minerals Corp. No. 1 Chas. Kaler, Villareal Survey.
Derrick.

Southern Minerals Corp. No. 2 Smith, 660 ft. E Graham's No. 1 Flato.
Rigging up.

W. F. Stone No. 1 Smith, cen. Lot 4, Ellendale Gardens, No. 2 Villareal Survey.
Drig. 1,210 ft.

W. A. R. Oil Co. No. 1 Edwards, 660 ft. N No. 1 Baldwin, Villareal Survey.
D.S.T. at 4,090 ft.; showed 800 ft. oil; set csg.; perforating.

Westgate Oil Co. No. 1 Geistman, 20-ac. tract, Villareal Survey.
Derrick.

Westgate Oil Co. No. 1 Lynch, 150 ft. N line, midway E and W lines, 8.3-ac. lease, Villareal Survey.
Coring 3,872 ft.

Saxet—Nueces County

Clarkewood Oil Co. No. 1 Isensee, C Blk. 4, Clarkewood Townsite.
Drig. 2,318 ft.

Conservative Oil Co.'s No. 2 K. Hutchins, 330 ft. S line, 430 ft. W line, Blk. 39.
Shut down 4,292 ft.

A. C. Erwin No. 1 Isensee, Blk. 6, Clarkwood Townsite.
Drig. shale 2,250 ft.

Houston Oil Co. No. 7 Morgan, 330 ft. N and W lines, 494.8-ac. tract, Sec. 7.
Comp. in pits; ¼-in. choke; I.P. 123 bbls. in 6 hrs.; 5/16-in. choke.

Houston Oil Co. No. 8 Morgan, 330 ft. N line, 967 ft. W line, 494.8-ac. tract, Sec. 7.
Sand 3,875-79 ft.; tested 1,200 ft. of oil; W.O.C.

Houston Oil Co. No. 3 Hunter, 330 ft. S and W lines, 159.87-ac. tract, Sur. 546.
Rigging up.

Magnolia Pet. Co. No. 2 Sanders, 330 ft. SW cor. 110-ac. tract, Sec. 165, B.S.&F. Sur.
Derrick.

Renwar Oil Co. No. 1 Winship, Blk. 3, Clarkewood Townsite, C. Land Sur.
Rigging up.

W. A. Richardson No. 1 Smith, C Blk. 4, Clarkwood townsite.
Derrick.

L. L. Smith No. 2 Walton, section 6, Kinney Survey.
Drig. 4,662 ft.

Southern Minerals Corp. No. 1 Isensee, 660 ft. W No. 4-A Isensee, C. Land Sur.
Skidding on.

Texon Royalty Co. No. 2 McElroy, 100 ft. N and W lines, 39.91-ac. tract, J. R. Ward Sur. No. 402.
Sand 3,994-4,003 ft.; comp.; 500 bbls. per day on ¼-in. choke; T.D. 4,003 ft.

Texon Royalty Co. No. 1 Kocurek, lease 156.53-ac. tract, J. R. Ward Survey No. 316.
Moving in material.

Texon Royalty Co. No. 3 Kocurek, 330 ft. N and W lines, tract, Ward Sur. 316.
Skidding on.

Plymouth—San Patricio County

Conroe Drlg. Co. No. 2-G Welder, sec. 47. T.D. 6,103 ft.; dry and abd.

Plymouth Oil Co. No. 28-C Welder, 216 ft. S line, 2,325 ft. W line, Sec. 49.
T.D. 5,625 ft.; comp.; I.P. 170 bbls. per day.

Plymouth Oil Co. No. 29-C Welder, 6,187 ft. S line, 1,371 ft. E line, sec. 71.
Sand 5,616-30 ft.; comp.; 230 bbls. per day; T.D. 5,630 ft.

Plymouth Oil Co. No. 30-C Welder, 502 ft. S line, 3,213 ft. W line, sec. 49.
T.D. 5,630 ft.; comp.; no gauge.

Plymouth Oil Co. No. 31-C Welder, 7,077 ft. S line, 1,091 ft. E line, sec. 71.
Drlg. shale 5,464 ft.

Plymouth Oil Co. No. 32-C Welder, 1,393 ft. S line, 3,491 ft. W line, Sec. 49.
Drlg. 3,875 ft.

Plymouth Oil Co. No. 33 C. Welder, 7,928 ft. S line, 710.5 ft. E line, sec. 71.
Rigging up.

Sun Oil Co. No. 2 Edgar, 330 ft. S and W lines, Blk. 1, sec. 34.
T.D. 6,080 ft.; fishing.

Sun Oil Co. No. 6 Hunt, 1,320 ft. S of No. 3, 466 ft. E line, sec. 34.
Location.

Taft Field—San Patricio County

Heep Oil Corp No. 1 Dentler, 330 ft. N and W lines, Lot 8, sec. 5, Second Addn. Farm Lands Subd.
Location.

Humble O. & R. Co. No. 1 Godwin, 330 ft. S line, 330 ft. W line, sec. 22, Taft Farm Lands, 3rd Addn.
Sand 5,222-29 ft.; tested S.W.; standing.

Humble O. & R. Co. No. 1 Mayo, 330 ft. S and E lines, lease, Wm. Burns Sur.
Derrick.

George E. Smith No. 2 Britton, 330 ft. N line, 990 ft. W line, Blk. 8.
T.D. 4,932 ft.; S.D.

L. L. Smith No. 1 Thompson, 330 ft. N and W lines, Lot 5, sec. 6, Second Addn., Farm Lands Subd.
Location.

Rio Grande City—Starr County

Fech Oil Co. No. 3 Frank Doyno, 150 ft. N line, 522 ft. W line, Blk. 4, Tract 77-A, Porc. 81.
S.D.

Samfordyce—Starr County

Phillips Petroleum Co. No. 2 Garcia Land & Cattle Co., 505 ft. S line, 714 ft. W line, 20-ac. tract, W½, Porc. 100.
Cored saturated sand 2,794-2,802 ft.; comp.; 75 bbls. per day on ¼-in. choke; T.P. 100 lbs.; C.P. 450 lbs.

Phillips and Barnsdall No. 6 Yturria Land & Cattle Co., 110-ac. lease, E½, Por. 100.
Drig. 333 ft.

Carolina-Texas—Webb County

Foster Barnsby No. 5 Webster, Sur. 684.
T.D. 2,930 ft.; W.O. wtr.

Holland Reavis No. 1 Webster, 150 ft. S and W lines, NW¼, NE¼, Sur. 684.
Sand 5,024-35 ft.; tested S.W.; standing.

Cole—Webb County

Cole Petroleum Co. No. 16 Benavides, Blk. 10, Sur. 16.
Coring 1,850 ft.

Cole Pet. Co. No. 93 Benavides, Block 10, Sur. 7.
Sand 3,334-44 ft.; tested S.W.; S.D. at 3,381 ft. for repairs.

Lopez—Webb County

Ivan Howard No. 1 Lopez, 330 ft. S and W lines, Sur. 2,350 ft.
Sand 2,278-81 ft.; odor of oil; reaming to test.

Hunter Co. No. 1 Billings, S½, NE¼, Survey 113.
Rigging up.

Hunter Oil Co. No. 2 Billings, 330 ft. N and E lines, S½ NE¼, Sur. 113.
Drig. 123 ft.

Mills Bennett Prod. Co. No. 2 Montemayor, 2,310 ft. W line, 2,042 ft. N line, Sur. 114.
Drig. 1,832 ft.

Mills Bennett Prod. Co. No. 3 Maria Lopez, Sur. 112.
Comp.; 493 bbls. per day; T.D. 2,218 ft.

Mills Bennett Prod. Co. No. 1 A. Lopez, SW cor. tract, Share 13, Tract 111.
Location.

Montour Prod. Co. No. 4 Coffey, Sur. 113.
Drig. 2,023 ft.

G. G. Mortimer No. 2 Maria Lopez, 330 ft. N and E lines lease, Sur. 112.
Drig. 1,021 ft.

G. G. Mortimer No. 4 Maria Lopez, Sur. 112.
Sand 2,196-2,213 ft.; comp.; 22 bbls. per hr.

G. G. Mortimer No. 7 M. Lopez, 1,650 ft. E line, 330 ft. S line, lease, Sur. 114.
Comp.; 16 bbls. per hr.

Superior Oil Co. No. 1 A. S. Billings, 330 ft. S and E lines, Sur. 7.
Drig. 2,855 ft.

Superior Oil Co. No. 5 Billings, Sur. 109.
Rigged up; S.D.

O'Hern—Webb County

O. W. Killam No. 45 Bruni, Sur. 453.
Coring 1,823 ft.

O. W. Killam No. 46 Bruni, 330 ft. N and W lines, Sur. 455.
Rigging up.

Magnolia Petroleum Co. No. 31 Brennan-Benavides, cen. Blk. 420, Hale Subdv., Arispe Grant.
Comp. 12 bbls. per hr. on 5/16-in. choke; T.D. 2,780 ft.

Magnolia Pet. Co. No. 32 Brennan-Benavides, C Blk. 397, Hale Subd., Arispe grant.
Drig. 1,015 ft.

Magnolia Pet. Co. No. 4-B S. Benavides, C Blk. 357.
Sand 2,792-2,800 ft.; set csg.; W.O.C.

Texas Co. 11 Brennan-Benavides, Blk. 491, Hale Subd.
Comp.; 48 bbls. per day; sand 2,815-41 ft.

Blas Uribe—Zapata County

O. W. Killam No. 6 Bruni, 4,509 ft. NE line, 7,297 ft. SE line, Tract B-7, Borrego grant.
Rigging up.

Escobas—Zapata County

S. R. C. Oil Corp.'s No. 16-A Trevino, 2,640 ft. E line, 330 ft. S line, Sur. 66.
Location.

Texas Co. No. 33 Whitehead, 25,567 ft. SW line, 10,061 ft. SE line, Cerrito Blanco grant.
Drig. 865 ft.

Haynes—Zapata County

Clover O. & G. Co. and J. P. Nash No. 7 Haynes, Blk. 7, Haynes Subd., Villa and Comitas grants.
Comp.; 35 bbls. per day on pump; T.D. 875 ft.

L. C. Muckelroy No. 1 Haynes, Blk. 8, Comitas & Villa grants.
Sand 791-94 ft.; running csg.; T.D. 805 ft.

South Texas Oil Co. No. 1 Fee, 330 ft. N and W lines, Blk. 21, Sur. 768.
Coring 1,625 ft.

WEST TEXAS WILDCATS

Week Ending February 8

Andrews County

Tippiehorn No. 2 King, 330 ft. from N and 2,310 ft. from E, sec. 11, Blk. A-46.
Standardizing 1,620 ft.

Borden County

C. E. Hyde No. 1 Miller, 1,650 ft. from N and W, sec. 28, Blk. 33, Twp. 4n, T.&P. Sur.
Drig. 3,200 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., 660 ft. from N and E, sec. 66, Blk. 10, G.H.&S.A. Sur.
T.D. 1,715 ft.

G. H. Storey No. 1 Wilson, 1,980 ft. from N and E lines of sec. 3, Blk. 213, T.&St. L. Sur.
Elev. 3,609 ft.; S.D. 1,875 ft.

Concho County

Maverick Oil Co. No. 1 Jim Rice, 330 ft. from S and W lines of NW¼ of sec. 18, S.N. Ry. Sur.
T.D. 1,593 ft.; U.R.

John W. Westbrook No. 1 Ledbetter, 1,950 ft. from N and 2,300 ft. from E lines of sec. 2, Sur. 1,672.
S.D. 2,026 ft.

Crane County

Clark et al No. 1 A. P. Jordan, 330 ft. from N and 448 ft. from E, sec. 13, Blk. B-32, P.S.L. Sur.
Location.

Eppenauer Drlg. Co. No. 1 fee, C of N line of SW¼, sec. 13, Blk. 6, H.&T.C. Sur., 7,500-ft. test.
Location.

Flaherty No. 1 E. Hughes, 2,964 ft. from S, 800 ft. from E, sec. 4, G.C.&S.F. Sur.
T.D. 2,950 ft.; testing.

Gulf Prod. Co. No. 1 Waddell, C NW NW sec. 4, Blk. B-27, P.S.L. Sur.
Top Simpson 6,060 ft.; T.D. 6,450 ft.; P.B. to 6,317 ft.; C.O. to 6,127 ft.; pumped 122 bbls. in 24 hrs.; gr. 34.7.

Humble O. & R. Co. No. 1 J. B. Tubb, 980 ft. from N and 980 ft. from W lines of sec. 11, Blk. B-27, P.S.L. Sur.
Fishing 2,403 ft.

Keyes et al No. 1 Ed S Hughes, 330 ft. from S and W, sec. 93, Blk. X, Julia Prater Sur.
Drig. 632 ft.

Moore Bros. No. 1 Barnsley, 1,320 ft. from S and W, sec. 43, Blk. 32, P.S.L. Sur.
Location.

Sinclair Prairie Oil Co. et al No. 1 Tubbs, 330 ft. from S and E, sec. 3, Blk. B-27, community test.
Drig. 2,636 ft.

Culberson County

Anderson-Prichard Oil Corp., Magnolia Pet. Co. et al No. 1 Borders, 1,355 ft. N and 2,305 ft. from W, sec. 34, Blk. 69, P.S.L. Sur.
T.D. 4,780 ft.; bailing hole.

Dawson County

Adams & Turner No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of sec. 46, Blk. M, E.L.&R.R. Sur.
S.D. 4,860 ft.; U.R. 6-in.

Ector County

Barnsdall Oil Co. et al No. 2 Foster, 660 ft. from S and W, sec. 18, Blk. 42, Twp. 2s, T.&P. Sur.
Drig. 210 ft.

W. P. Dunning, Jr. et al No. 1 Mrs. Clarence Scharbauer, 440 ft. from S and 2,200 ft. from W lines of sec. 33, Blk. 44, Twp. 1n. T.&P. Sur.
T.D. 4,058 ft.; killing gas.

Gulf Prod. Co. No. 2 Goldsmith, 2,200 ft. from N and 440 ft. from E lines of sec. 15, Blk. 44, Twp. 1s, T.&P. Sur.
T.D. 3,972 ft.; R.U. rotary to complete.

Stanolind O. & G. Co. No. 1 J. B. Witcher, 660 ft. N and E sec. 24, Blk. 43, 2s, T. &P. Sur.
Drig. 3,726 ft.

Gaines County

Wahlenmaier Pet. Co. et al No. 1 E. H. Jones, 660 ft. S and W, sec. 414, Blk. G. C.C.S.D.&R.G.N.G. Sur., 23 miles NW of Seminole.
Top gray lime 4,980 ft.; drlg. 5,075 ft.

W. T. Walsh et al No. 1 Averitt, 330 ft. N and E lines, sec. 228, Blk. G, W.T.R.R. Sur.
Elev. 3,322 ft.; gas show 2,785 ft.; increase 2,795 ft.; increase gas 3,133 ft.; lost tools again; est. 15,000,000 ft. of gas; decreased to 4,000,000 ft.; show dead oil 3,365 ft.; drlg. 3,776 ft.

Garza County

M. L. Richards No. 1 Post Estate, 1,570 ft. from N and 300 ft. from E, sec. 6, Blk. 5, K. Aycock Sur.
Drig. 2,060 ft.

Glasscock County

John I. Moore et al No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of sec. 32, Blk. 34, Twp. 2s, T.&P. Sur.
Topped lime 9,471 ft.; show oil and gas 9,484-9,520 ft.; increase oil 9,594-9,600 ft. and 9,632-55 ft.; made 150-bbl. flow when opened on test; well opened after being shut in 33 days; flowed 35 bbls. oil; 1,250 lbs. pressure; drlg. 10,590 ft.; oil status 10,490-10,521 ft.

World Oil Co. No. 4-C McDowell, 330 ft. from N and E, sec. 21, Blk. 34, Twp. 2s, T.&P. Sur.
S.D. 1,880 ft.

Hudspeth County

Haymon Krupp Oil & Land Co. No. 1 Thaxton, 1,464 ft. from S and 391 ft. from E, sec. 34, Blk. 74, Twp. 4, T.&P. Sur.
Drig. 607 ft.

Jeff Davis County

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,823 ft. from E, Sec. 8, Blk. 8, H.&T.C. Sur.
Drig. 2,268 ft.

Jones County

Anderson & Richards No. 1 Ransom, 325 ft. from N and 200 ft. from E, G. B. M. Cloptar Sur. No. 244.
S.D. 1,100 ft.

Herring et al No. 1 Cowsart, 175 ft. from N and W, sec. 42, O.A.L. Sur.
Fishing 2,000 ft.

Hughes No. 1 Bumpass, 220 ft. from N and 1,320 ft. from W lines, T. Maltby Sur. No. 252.
Drig. 1,816 ft.

Bob Elmore No. 1 Coton, 675 ft. from N and 2,050 ft. from W lines of SW¼, sec. 10, D.D.&A. lands, 3 miles W of Avoca.
Drig. 1,429 ft.

Shaheen et al No. 1 J. J. Steele, 660 ft. from S and 1,980 ft. from E, sec. 11, Blk. 15, T.&P. Sur.
T.D. 1,296 ft.

Shaheen et al No. 1 T. B. McCoy, 660 ft. from N and 1,320 ft. from E of most easterly SE cor. sec. 1, Blk. 16, T.&P. Sur.
Drig. 210 ft.

Pecos County

Ajax Drlg. Co.'s No. 1 University, 2,310 ft. from S and W, Sec. 13, Blk. 18
T.D. 1,765 ft.; P.B. to 1,719 ft.; acidized twice; to shoot.

Cardinal Oil Co. No. 1-44 White & Baker, 1,374 ft. from N and 175 ft. from E, sec. 44, Blk. Z, T.C. Ry. Sur.
Drig. 1,212 ft.

Clark et al No. 1 McKenzie, 330 ft. from N and 1,650 ft. from W, sec. 9, Blk. 664.
Drig. 1,423 ft.

Dobbs Oil Co. No. 1 Rooney, 990 ft. from E and 800 ft. from N, sec. 12, Blk. 136, T.&St.L. Sur.
Spudded and S.D.; to R.U. machine.

Tex-Mex Pet. Co. No. 1 Phillips-Brandenburg, 330 ft. from S and E of N half sec. 42, Blk. 8, H.&G.N. Sur.
Drig. 2,329 ft.

Tex-Mex Pet. Co. No. 1 Lowry, 330 ft. from S and E of N½ sec. 80, Blk. 8, H.&G.N. Sur.
Drig. 1,978 ft.

Trans-Pecos Oil Co. No. 1 F. W. Popham, 1,650 ft. from S and E, sec. 236, Blk. 11, G.H.&S.A. Sur.
Crooked hole 120 ft.

Trans-Tex Oil Co. No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of

Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
S.O. 3,905-4,000 ft.; 1 bailer oil in 45 hrs.; drlg. 5,150 ft.

Presidio County

J. F. Sadler No. 1 J. R. Bledsoe, 2,640 ft. N and W sec. 18, Blk. 354, G.C.& S.F. Sur., 2½ miles N of Presidio.
Elev. 2,732 ft.; S.D. 922 ft.; set csg.

Schleicher County

Cardinal Oil Co. et al No. 1 J. A. Whitten, 660 ft. from N and 1,980 ft. from W, sec. 35, Blk. LL, T.C. Ry. Sur.
T.D. 565 ft.; set 15⅝-in. csg.

Cecil Rains et al No. 1 Judkins & Spencer, C SW¼ sec. 4, Blk. V-28.
Elev. 2,209 ft.; drlg. 4,073 ft.

Upton County

Cordova Union No. 1 fee, 672 ft. S of I.T.I.O. No. 1 Cordova Union, sec. 3, Blk. A.B.
T.D. 3,176 ft.; C.O.; 1,800 ft. oil in hole.

John Emch and Shell Pet. Corp. No. 1 Gordon, 660 ft. from N and 1,300 ft. from E, sec. 47, Blk. Y, T.C. Ry. Sur.
Drlg. 822 ft.; elev. 2,677 ft.

Greencliff Oil Corp. et al No. 1 J. H. Tippett, C NE¼ sec. 58, Blk. Y, T.C. Sur.
T.D. 1,351 ft.

I.T.I.O. and Foster No. 1 Cordova Union, 624 ft. W of Ray No. 1 Cordova Union, sec. 3, Blk. AB, A. E. Baxley Sur.
Drlg. 2,101 ft.

J. G. McKenzie No. 1 Taylor, 1,650 ft. from S and 330 ft. from E lines of sec. 22, Blk. B-2, G.H.&S.F. Sur.
T.D. 630 ft.

O. F. M. No. 1 King Ranch, 330 ft. from NE and SE, sec. 22, Blk. 35, H.&T.C. Sur.
Spudded.

Ward County

Abell Brothers' No. 1 Lancaster Estate, 294 ft. N 20 degrees and 15 minutes W of NE cor. Sec. 61, Blk. 8, H.&G.N Sur. in Pecos County, 5¼ miles down Pecos River from NW cor. of Pecos and E cor. of Reeves County.
Drlg. 1,122 ft.

Olsen & Anderson No. 1 Yell, 330 ft. NE and SE lines of W. F. Stewart Sur., sec. 6.
T.D. 2,600 ft.; P.B. to 2,455 ft.; trying to shut off wtr.

C. Cothran No. 1 Greene, 990 ft. from NW and 2,980 ft. from SW, sec. 49, Bl. B-29, P.S.L. Sur.
Drlg. 2,268 ft.

Dobbs Oil Co. No. 1 A. F. Bray.
T.D. 2,563 ft.; T.P. 2,551 ft.; testing.

Winkler County

Amerada Pet. Corp. No. 1 Daugherty, 330 ft. from S and E, sec. 35, Blk. 74, P.S.L. Sur.
Drlg. 2,348 ft.

Cherry et al No. 1 Central State Bank of Abilene, 330 ft. from N and 2,310 ft. from E, sec. 25, Blk. 26, P.S.L. Sur.
Drlg. 577 ft.

Crafton Oil Co. No. 2 Pure-Walton, 2,200 ft. N and E, sec. 1, Blk. 3-B.
Material.

Emperor Oil Co. No. 1 Continental-Holley, 330 ft. from S and 2,310 ft. from W, sec. 12, Blk. B-12.
T.P. 2,704 ft.; T.D. 2,943 ft.; P.B. 2,923 ft.; to gauge.

Falcon Oil Co. No. 1 McCutchen, 440 ft. from S and 2,200 ft. from E, sec. 15, Blk. B-2, P.S.L. Sur.
Drlg. 2,320 ft.

Gulf Prod. Co. No. 1 Hill, 440 ft. from S and 2,200 ft. from E, sec. 9, Blk. B-11.
Drlg. 3,172 ft.

Gulf Prod. Co. No. 10 Keystone, 440 ft. from E and 2,200 ft. from S, Sec. 10 Blk. B-3.
T.D. 3,576 ft.; to run tubing and plug off wtr.

Gulf Prod. Co. No. 46 O'Brien.
Drlg. 2,827 ft.

R. H. Henderson No. 1 McCutchen, 2,310 ft. from S and W, sec. 16, Blk. B-3.
Derrick.

Humble O. & R. Co. No. 1 Daugherty, 330 ft. from S and E, sec. 20, Blk. 74, Midway between Sayre and Scarborough pools.
Location.

Humble O. & R. Co. No. 1 Leck, 330 ft. from S and 2,310 ft. from E, sec. 21, Blk. 74.
Location.

K-D Oil Co. No. 1 P. Mitchell, 1,650 ft. from N and 2,310 ft. from E, sec. 23, Blk. B-10, P.S.L. Sur.
Cable tools rigged up.

Magnolia Pet. Co. No. 1 N. R. Colby, 330 ft. from S and E, sec. 38, Blk. 24, P.S.L. R.U. rotary.

Magnolia Pet. Co. No. 1 State-Walton, 2,310 ft. from S and 990 ft. from E, sec. 7, Blk. B-3.
Drlg. 3,161 ft.

Fred Hyer No. 1 Evans, 1,320 ft. from N and W, sec. 9, Blk. 56.
Fishing 1,985 ft.

Joiner No. 1 Evans, 1,170 ft. from N and 1,320 ft. from W, sec. 46, Blk. 73, P.S.L. Sur.
Fishing 1,980 ft.

Maxwell et al No. 1 State-Walton, 330 ft. N and W of SW¼, sec. 27, Blk. B-3.
R.U. machine.

Thurman et al No. 1 Seth Campbell 18-B-3, 330 ft. from S and 1,650 ft. from W lines of sec. 18, Blk. B-3, P.S.L. Sur.
T.D. 3,200 ft.; shot with 550 qts. and 250 qts.; to set csg. and C.O.

Sinclair Prairie Oil Co. No. 1 J. B. Walton, 440 ft. from N and E, sec. 20, Blk 77, P.S.L.
Cellar.

Sun Oil Co. No. 1 Keystone, 440 ft. from S and E, sec. 3, Blk. 77.
R.U. rotary.

Superior O. & G. Co. of Tulsa No. 1 M. J. Hill, 2,310 ft. from W and 330 ft. from S, sec. 18, Blk. B-11, P.S.L.
R.U. standard tools.

Wahlenmaier and Atlantic Oil Prod. Co. No. 1-A Walton, 330 ft. from S and 2,310 ft. from W, sec. 34, Blk. 74.
Drlg. 415 ft.

Yoakum County

C. J. Davidson et al No. 1 Bennett, 1,320 ft. from N and E, sec. 678, John H. Gibson Sur.
Elev. 2,557 ft.; T.D. 5,090 ft.; 4,000 ft. fluid in hole, mostly oil; set 6⅝-in. csg. at 4,651 ft.; moving in storage.

NORTH CENTRAL TEXAS WILDCATS

Week Ending February 8

Archer County

L. T. Burns No. 1-A Archer County, 693 ft. from N and 912 ft. from E lines of J. Llewellyn Sur., A-256.
R.U. and S.D.

Consolidated Oil Co. et al No. 1 L. F. Wilson, 1,650 ft. from S and 2,310 ft. from W lines of sec. 76, Lot 2, A.T.N.C. Lands.
Location.

Darsey and Continental No. 1 Jones, 150 ft. from N and W lines of SW¼ of sec. 1,840, T.E.&L. Sur.
Drlg. 1,046 ft.

Deep Oil Dev. Co. No. 11, Lease 4, L. F. Wilson, 990 ft. from S and W lines of sec. 76, A.T.N.C. Lands.
Drlg. 2,958 ft.

Harry Hines et al No. 1 Cullum & Jones, 150 ft. from S and 500 ft. from E lines of S½ of Blk. 8, sec. 13, A.T.N.C. Lands.
Location.

C. A. Lininger et al No. 1 Wm. Coleman, 150 ft. from N and E lines of S 20 acres of W½ of Blk. 32, Coleman Subd.
S.D. 950 ft.

Perkins & Cullum No. 1 L. F. Wilson, 330 ft. from N and W lines of N 60 acres of W 80 acres of SE¼ of sec. 118, A.T.N.C. Lands.
Drlg. 300 ft.

Seaberry et al No. 1 Parrish Bros., 150 ft. from N and W lines of E 40 of S 80 acres of E½ of sec. 110, Wm. Sellars Sur. A-334.
Location.

J. B. Shira No. 1 D. L. Wolf, 150 ft. from S and E lines of Lot 56, Blk. 4, Clark & Plub Sur.
Location.

Baylor County

Hardgrave & McCulloch No. 1 Louis Hrncirik, 150 ft. from S and 1,900 ft. from E lines of sec. 5, B.B.B.&C. Sur. A-70.
Shut down 300 ft.

T. P. Hunter No. 1 Fayette County School land, 3,300 ft. from S and 1,300 ft. from W lines of Fayette County School Land Sur.
S.D. 468 ft.

Morris & Spoonts No. 1 D. K. Martin, 150 ft. from S and E lines of W½ of SE¼ of sec. 212, T.&N.O. Sur., A-748.
Machine.

W. P. Morris et al No. 1 C. T. Porter, 1,170 ft. from N and 150 ft. from E. Edward Brown Sur.
S.D. 1,290 ft.

Cooke County

Cain & Chandler No. 1 J. B. Burch, 1,050 ft. from S and E lines of farm, which extends into the J. Caspiarn Sur., but in J. McWilliams Sur. A-658.
Material.

C. F. Carter No. 1 Davidson, 750 ft. from S and 150 ft. from W lines of farm in NW part of Geo. Dooley Sur. A-301.
Rigging up spudder.

T. P. Frost No. 1 Rohmer, 750 ft. from S and 150 ft. from E lines of Blk. 16, George Grey Sur., A-516.
R.U. rotary.

Hardin Oil Co. No. 1 J. G. Bonner, 1,350 ft. from W and 150 ft. from N, J. Lindheimer Sur.
S.D. 1,307 ft.

J. F. Hart No. 1 Gwyn, 150 ft. from N and 1,320 ft. from W lines of Marshall University Sur. A-619.
S.D. 1,510 ft.

Hester Oil Co. No. 1 R. W. Trew, 150 ft. from S and E lines of S 49 acres of N½ of E. S. Ramsey Sur., A-1,620.
Drlg. 720 ft.

H. E. Hoover et al No. 1 G. C. Cartwright, 150 ft. from S and E lnies of farm, B. J. Thompson Sur., A-1,008.
Drlg. 50 ft.

W. F. Johnson No. 1 Pauline Gentzke, 150 ft. from S and 600 ft. from E lines of W. C. Brown Sur., A-102.
Moving in rotary.

Lanier et al No. 1 Thetford, 1,500 ft. W and 473 ft. N of SE cor. of farm, S.P.R.R. Sur., A-987.
S.D. 610 ft.

L. A. Long et al No. 1 Sarles, 200 ft. from N and W lines of sec. 23, Hunt County School Lands, Survey A-440.
Rotary derrick.

Mills & Carey No. 1 A. M. Bezner, 150 ft. from N and W lines of J. B. Trenary Sur.
S.D. 200 ft.

C. Newburn No. 1 Dotson, 450 ft. from N and W lines of Wm. Campbell Sur. A-238.
S.D. 1,060 ft.

Petroleum Producers No. 1 J. W. Mount, 150 ft. from S and E lines of J. C. Meeks Sur., A-758.
Moving in spudder.

L. E. Rader No. 1 McCubbin, 150 ft. from N and 1,256 ft. from E lines of R. Wheelock Sur., A-1,684.
Spudded with spudder; will move in rotary.

Raye Oil Corp. No. 1 Reiter, 150 ft. from S and E lines of 106-ac. farm, G. M. Casey Sur. A-198.
Sand with show of oil 936-43 ft. and 944-45 ft.; T.D. 960 ft.; drill pipe stuck.

W. F. Russell No. 1 Belle Payne, 2,517 ft. from N and 2,440 ft. from W lines of Marshall University Sur. A-620.
Moving in spudder.

J. M. Russell et al No. 1 B. B. Bawley, 1,450 ft. from S and 150 ft. from W lines of Blk. 24, John Barnett Sur.
S.D. 500 ft.

Sunray Oil Co. et al No. 1-A A. C. McCall, 75 ft. E of well No. 1, W. H. White Sur., A-1,134.
Building derrick.

Woodbine Oil Co. No. 1 Potter & Potter, 150 ft. from N and E of SE cor. of G Morris Sur., but in J. Gorham Sur.
S.D. 600 ft.

Denton County

Burns Oil Co. No. 1 J. T. Harmon, 1,040 ft. from N and 370 ft. from W lines of lease, J. M. Moses Sur.
Drlg. 2,150 ft.

Oil Finance Corp. No. 1 J. S. Gambill, 400 ft. from S and 550 ft. from W lines of T. Burress Sur.
S.D. 470 ft.

C. S. Hoad No. 1 Travelers Insurance Co., 530 ft. from S and 940 ft. from E lines of Wm. A. Thompson Sur., A-1,238.
R.U. and S.D.

Foard County

Humble O. & R. Co. No. 1 Burnett, 314 ft. from N and 1,579 ft. from W lines of sec. 16, Blk. X, S.P.R.R. Sur.
Drlg. 245 ft.

Haskell County

Anderson & Kerr No. 1 J. F. Suey, 440 ft. from N and W lines of E½ of NE¼ of sec. 2, Blk. 3, H.&T.C. Sur.
T.D. 1,810 ft.; drlg. by csg.

Jack County

Bryson Oil & Gas Co. No. 1 G. E. Evett, 330 ft. from N and W lines of E 67½ acres of farm, George Hardesty Sur. A-294.
Building derrick.

Iron Mountain Oil Co. No. 1 J. W. Birdwell, 330 ft. from N and W lines of N 40 acres of farm, Geo. Hardesty Sur. A-294.
Drlg. 2,807 ft.

Jackson et al No. 1 Bloodworth, 2,900 ft. from S and 1,800 ft. from W lines of most southern SW cor. of J. F. Cheairs Sur. A-149.
Location.

Nelson Oil Synd. No. 1 J. P. McCoy, 330 ft. S and E of most northerly NW cor. of A. S. Ensworth Sur.
S.D. 1,980 ft.

Montague County

Boardman Bros. No. 1 I. Keck, 6,200 ft. from S and 2,600 ft. from W of NE cor. of Wm. Donoho Sur.
S.D. 897 ft. for spudder.

A. Gutowsky et al No. 1 J. E. Lemmon, 150 ft. from N and 1,250 ft. from W lines of N 190 acres of Blk. 13, C. K. Hamm Sur. A-322.
S.D. 415 ft.

J. F. Hart No. 1 W. M. Talley, 1,000 ft. from SW and 200 ft. from SE, J. Perrin Sur.
Drlg. 1,355 ft.

Jim Seeds et al No. 1 Coombs, 150 ft. from N and E lines of W 80 acres of 160-ac. farm, sec. 58, M.E.P.&P. Sur.
T.D. 850 ft.; C.O.

W. E. Howard No. 1 C. F. Phillips, 727 ft. from SE and 1,200 ft. from NE and SW lines of V. B. Matthews Sur.
S.D. 270 ft.

P. L. Vaich No. 1 Adams, 150 ft. from N and W lines of 80-ac. farm, R. H. Grimes Sur. A-288.
Drlg. 1,870 ft.

M. C. Wells No. 1 Collier, 750 ft. from SW and 1,120 ft. from SE line of M. Hunt Sur., sec. 14.
Spudded and S.D.

Westqumo Co. No. 1 J. M. Willett, 480 ft. from S and 400 ft. from E lines of Blk. 3, Harriet Brown Sur.
S.D. 1,110 ft.; sand with H.F.W. 1,102-10 ft.

Throckmorton County

Ben Ashe et al No. 1 W. B. Parrott, C NW¼ of NW¼ of sec. 961, T.E.&L. Sur.
Moving in.

J. W. Cole No. 1 Chandler, 150 ft. from N and E lines of SE¼ of sec. 2,142, T. E.&L. Sur.
Location.

Ben F. Looney, Jr., No. 2 Robinson, 370 ft. from N and 1,450 ft. from W lines of sec. 1,650, T.E.&L. Sur.
Gas sand 396-412 ft.; est. 1,500,000 ft. gas daily.
T.D. 412 ft.; shut down.

Wichita County

F. W. Boardman et al No. 1 J. L. Jackson, 150 ft. from N and 900 ft. from W lines of Blk. 28, League 4, Denton County School Lands, Survey A-417.
Drlg. 300 ft.

P. H. Flynn No. 1 W. L. Scott, 450 ft. from N and 2,240 ft. from W lines of N 70 of S 150 of W 400 acres of sec. 14, Tarrant County School Land Sur. A-282.
S.D. 2,011 ft.

Luke Hodges No. 1 J. W. Aiken, 400 ft. from N and 920 ft. from W lines of NW¼ of sec. 4, Tarrant County School Land Sur. A-282.
S.D. 1,904 ft.; lime from 1,884-1,904 ft.

W. B. Omohundro No. 1 S. P. Gibson, 924 ft. from S and 150 ft. from E lines of S 60 acres of E½ of Blk. 302, Waggoner Colony Lands.
R.U. rotary.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller et al, 2,850 ft. from N and 1,550 ft. from W lines, sec. 108, Blk. 14, H.&T.C. Sur.
S.D. 1,520 ft.

W. B. Hamilton No. 1 W. T. Waggoner estate, 1,706 ft. E and 1,305 ft. N of NE cor. sec. 50, Blk. 2, H.&T.C. Sur., but in Blk. 30, J. Poitevent Sur. A-1,612.
Drlg. 575 ft.

King Royalty Co. et al No. 1-N Waggoner Est., 1,155 ft. from N and 2,145 ft. from E lines of N½ of sec. 104, Blk. 14, H.&T.C. Sur.
Drlg. 1,385 ft.

Smith No. 1 S. A. Dill et al, 150 ft. from N and E lines, sec. 82, Blk. 14, H.&T.C. Sur.
S.D. 1,890 ft.

Wise County

W. B. Hamilton No. 1 S. L. McNay, 1,320 ft. from NE and 980 ft. from SE lines of N. Ledbetter Sur.
S.D. 1,277 ft.

Jarvis & Nix et al No. 1 Williams, 1,100 ft. from S and 1,400 ft. from E lines of Blk. 4, F.C.S.L. Sur.
S.D. 975 ft.

Young County

Alexander & Beavers o. 1 G. B. Hamilton, 150 ft. from N and E lines of farm, sec. 3,401, T.E.&L. Sur.
Drlg. 800 ft.

Barton & Scott No. 1 J. L. Rhodes, 330 ft. from S and E lines of B. F. Kutch Sur. A-1,333.
Derrick.

R. Bullock No. 1 Fee, 270 ft. S and 3,250 ft. from E lines of farm, Mary Hamilton Sur. A-138.
Location.

Carl Pet. Co. No. 1 Goss, 150 ft. from S and W lines of sec. 1,592, T.E.&L. Sur.
Drlg. 1,000 ft.

Christie Bros. No. 1 Deats et al, 424 ft. from SW and 420 ft. from SE lines of J. C. Holly Sur., A-1,602.
Moving in material.

Christie Bros. No. 1 Primitive Baptist Church, 3,394 ft. SE and 500 ft. from NE lines of S. L. Hill Sur. A-126.
S.D. 2,415 ft. for repairs.

Curtis & Bracken No. 1 Allar Co., 330 ft. from N and & W lines of N 70 of S 300 acres of H. Garmes Sur. A-104.
Spudding.

B. C. Gilmore et al No. 1 A. Williams, 750 ft. from N and 1,050 ft. from W lines of W. C. Adams Sur. A-1,364.
Spudder.

L. V. Hull et al No. 1 A. B. Street, center of sec. 303, T.E.&L. Sur.
Location.

C. E. Knox No. 1 Washam, 200 ft. from S and W lines of Blk. 8, sec. 3,412, T. E.&L. Sur.
Derrick.

Dobbs Oil Co. and McLester No. 1 Laquey, 1,570 ft. from NW and 616 ft. from SW lines of J. Buse Sur., A-1,570.
Drlg. 610 ft.

Murry R. Hart No. 1 McCluskey, 930 ft. S and 900 ft. W of NW cor. of B. Campbell Sur. A-37, but in T. J. Mullinax Sur. A-1004.
R.U. and S.D.

Nash & Windfohr No. 1 W. S. Simms, 330 ft. from S and 1,650 ft. from W lines of D. Franklin Sur., A-1,425.
Location.

C. D. Neff et al No. 1 W. A. Dennis, 1,530 ft. from N and 1,782 ft. from E. C. F. Bass Sur.
Show gas in sand 1,990-95 ft.; wtr. 1,995-2,000 ft.; T.D. 2,100 ft.; fishing tools.

Pitzer & West No. 1 McCluskey, 660 ft. from N and W lines of 74-ac. tract, sec. 1,104, T.E.&L. Sur. A-327.
Moving in tools.

Pitzer & West No. 1 J. N. Boozer, 3,000 ft. from S and 1,300 ft. from E lines of sec. 1,104, T.E.&L. Sur., 150 ft. south of river.
Lime 3,600-05 ft.; hole full oil; acidized with 3,000 gals. acid; flowed 35 bbls. per hr.; cased off upper pay; lower pay 3,990-94 ft.; est. 100 bbls. per day; drlg at T.D. of 4,485 ft.; P.B. to 4,025 ft.; shot with 80 qts. from 3,990-4,025 ft.; now fishing tubing.

Pitzer & West No. 1 S. L. Thornton, 457 ft. from N and 875 ft. from E lines of farm, sec. 1,015, T.E.&L. Sur., A-824.
Location.

Ray & Staniforth No. 1 Wooten, 200 ft. from S and E lines of sec. 1,976, T.E.& L. Sur.
Building derrick.

E. C. Reed No. 1 A. C. Daws, 1,250 ft. from N and 150 ft. from E lines of sec. 1,680, T.E.&L. Sur.
Spudded.

Roberts Oil Corp. No. 1 Brogden, 330 ft. from S and W lines of farm, H. Garmes Sur. A-104.
Drlg. 890 ft.

Texas Co. No. 1 G. B. Hamilton, 200 ft. from S and 1,700 ft. from W lines of sec. 1,480 ft., T.E.&L. Sur.
Drlg. 150 ft.

Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935-36 High	1935-36 Low	Week ended Feb. 8 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1934 High	1934 Low	1933 High	1933 Low
87	48½	3,900	83¾	82¼	83	Amerada Corp.	788,675	N.P.	50cQ	1-31-36	$2.00	55⅝	39	47⅝	18½
33¼	20½	39,800	33¼	30⅝	32⅝	Atlantic Refining	2,664,904	$25	25cQ	12-16-35	1.00	35¼	21½	32½	12⅝
18¼	5⅞	45,900	18¼	17⅛	17⅜	Barnsdall Corp.	2,195,397	$5	15cQ†	2-1-36	‡.20	10	5⅞	11	3
16⅝	3⅜	86,700	16½	15¾	16¼	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-15-35	.20	19¼	6⅝	28⅛	9
15	6½	114,000	15	14⅛	14¼	Consolidated Oil Corp.	13,996,072	N.P.	14c	10-31-34	.25	14¾	7¼	15⅝	5
38	15⅛	28,000	38	36⅝	37⅝	Continental Oil of Delaware	4,682,722	$5	25c	1-31-36	.62½	22¾	15⅜	19⅝	4⅞
34⅜	11⅜	25,400	34⅜	31½	33¼	General Asphalt	387,149	$10	25c	12-17-35	.25	23½	12	27	4⅝
12¼	1½	24,400	11⅜	10⅛	10⅜	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅜	2½	7⅜	1⅞
22	9½	17,300	21⅞	21⅛	21¼	Mid-Continent Petroleum	1,857,912	$10	25c	12-2-35	.40	14¾	9⅛	16	3¾
32	9	19,700	32	28	29¾	National Supply of Delaware	382,591	$25	....	5-15-31	....	21⅛	10	28⅝	4
17½	9¼	37,500	17¼	16½	16⅞	Ohio Oil Co.	6,563,377	N.P.	15cSA	12-14-35	.30	15⅞	8½	17⅝	4¾
17	6¾	19,400	17	14¼	17	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	9⅜	5½	9½	3
3⅝	½	2,400	3	2⅜	2⅞	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅝
45⅜	13¾	45,500	45⅜	43	45⅛	Phillips Petroleum	4,154,687	N.P.	50c†	2-29-36	1.25	20¾	13⅜	18¾	4⅝
15¼	6½	18,800	15¼	14½	14½	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	.25	16¾	7¼	17⅝	6⅜
21⅛	5⅞	48,600	20½	19⅜	20	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅝	2⅓
57	29½	900	57	56	56	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.70	39½	28⅝	39¾	17⅝
38	20¾	22,500	38	34½	36½	Seaboard Oil of Delaware	1,244,283	N.P.	15cQ†	12-14-35	1.00	38⅜	20¾	43⅜	15
18½	5½	20,600	18¼	17	17¼	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
116½	63⅛	2,700	113	112	113	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18¾	4¾	5,600	5⅝	5⅛	5⅛	Simms Petroleum	461,688	$10	1.25 liq.	10-18-35	11.75 liq.	17½	7¼	12⅜	4⅞
27¾	6½	9,400	27¾	25¾	27	Skelly Oil	1,008,514	$15	....	12-15-30	....	11½	6	9⅞	3
17	10⅝	201,100	17	16⅛	16½	Socony-Vacuum	31,154,379	$15	20cSA	3-16-36	.30	19⅞	12½	17	6
47⅝	27¾	63,000	47⅝	43⅜	47⅜	Standard Oil of California	13,102,900	N.P.	25cQ†	3-16-36	1.00	42⅞	26½	45	19½
40⅛	23	51,100	40⅛	38⅛	39¾	Standard Oil (Indiana)	15,215,677	$25	25cQ	3-16-36	1.00	32¾	23¼	34	17
32	30	700	30	29	30	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	41	26	39⅞	12¾
60⅝	35¾	63,700	60⅝	59	59⅜	Standard Oil of New Jersey	25,856,081	$25	50cSA†	12-16-35	‖1.25	50½	39¼	47½	22¾
89	60½	900	87½	87⅜	87⅜	Sun Oil	1,733,013	N.P.	25cQ	3-16-36	$1 & 7% Stk.	74¼	51½	59	35
34⅜	16½	32,100	34⅜	33⅜	33⅞	Texas Corp.	9,486,417	$25	25cQ	1-1-36	1.00	29⅜	19⅝	30½	10⅜
13¼	3¼	91,100	13¼	9½	13	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅝
19¼	7⅝	63,400	19⅛	18⅛	18¼	Tide Water Associated	5,631,341	N.P.	25c	1-15-36	....	14⅜	8	11¾	3⅛
104½	84	2,100	104½	103½	103¾	Tide Water Associated pfd.	666,524	$100	$1.50Q	1-2-36	§6.50	87	64½	65¼	23½
28¼	14⅜	68,900	28½	25	28¼	Union Oil of California	4,386,070	$25	25cQ	2-10-36	1.00	20½	11½	23⅜	8½
31½	20¼	16,300	31⅝	24⅝	30	Union Tank Car Co.	1,200,000	N.P.	30cQ	3-2-36	1.20	25¾	15⅝	22¾	10½
4⅝	1	3,000	4⅝	3⅞	4	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¾	2	5½	2

•Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35.

Market Record of Active Oil Stocks Listed on New York Curb

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1935-36 High	1935-36 Low	Week ended Feb. 8 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends Paid in 1934	1934 High	1934 Low	1933 High	1933 Low
16	3¾	2,500	15⅛	13½	13½	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	3¾	½	1⅛	¼
50	30½	200	49	47½	48	Buckeye Pipe Line Co.	200,000	$50	75cQ	3-14-36	$3.00	38	26	29¾	25
4⅞	1⅝	109,900	4⅞	3½	4½	Caribb Syndicate	799,020	25c	....	.....	....	5½	1½	7¾	¼
157	115	350	123	122	122	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-27-35	6.50	150	116	129	71
7⅜	¾	644,100	7⅜	5½	6	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1⅛
3	½	81,000	3	1⅜	2⅝	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	¼
2⅞	¼	55,900	2⅞	1⅞	2¾	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅜
34⅜	10	50,900	34⅜	31⅝	33⅜	Creole Petroleum	6,974,356	$5	20c	12-31-35	.20	14⅜	9⅝	12	4¾
11	4	800	10⅞	10	10½	Darby Petroleum	509,696	$5	25cSA	1-15-36	.50	7½	4⅛	8	2⅛
3½	¾	1,800	3¼	3	3	Derby Oil & Refining	263,162	N.P.	....	.....	....	2¼	1	2¾	⅞
44	33¼	200	44	43	44	Eureka Pipe Line	50,000	$50	$1Q	2-1-36	4.00	37	30	41¾	20
87½	50¼	11,100	87⅛	83⅛	84¼	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
73⅞	44	3,800	73⅝	69	70	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	10-1-35	1.25	49½	33¼	105½	40
24½	15⅜	17,600	24½	23⅞	23⅞	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-2-35	1.25	17⅞	12⅝	15⅞	6½
9¼	3⅝	5,200	9¼	6⅜	8¾	Indiana Pipe Line	300,000	$10	15cSA†	11-15-35	.35	6⅞	3⅝	8	3½
39⅜	28	25,200	39⅜	37⅞	38⅝	International Petroleum	14,247,088	N.P.	$1.25†‡	12-2-35	2.50	33⅜	19⅜	23½	8⅞
14¼	4⅜	31,900	13⅞	12⅜	13½	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	12-16-35	.10	5	2⅛	2¼	⅞
9½	3½	3,200	9½	8½	8⅝	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
12⅜	4½	8,000	12⅜	10⅞	12¼	Lone Star Gas	5,382,723	N.P.	20cSA	1-15-36	.30	8⅜	4¼	11⅞	4¾
8⅜	4⅛	8,500	8⅜	7½	7¾	Mountain Producers	1,682,182	$10	30cSA	12-31-35	.90	5½	4	6½	2½
23	11¾	2,400	22	21	21½	National Fuel Gas	3,810,183	N.P.	25cQ	1-15-36	1.25	18⅛	13⅛	20	10
15	6¾	2,600	15	13½	15	National Transit	509,000	$12.50	35cSA	12-16-35	.75	9½	7	10	5½
4½	2	3,200	4½	4	4¼	New Bradford Oil	1,445,202	$5	10cSA	9-16-35	.20	2½	1¾	2⅛	½
6⅜	1	27,000	6⅜	4⅜	6⅜	New Mexico and Arizona	1,000,000	$1	....	.....	....	2⅜	1	1⅞	½
6	3	1,400	6	4⅞	5¾	New York Transit	100,000	$5	15cSA	4-15-35	.30	4¾	3	4⅞	3
8⅜	5¼	1,200	8⅜	7½	8⅜	Northern Pipe Line	120,000	$10	25cSA	2-2-36	.50	7	4⅝	6⅛	4¼
6¼	1¼	127,300	6⅛	5	5⅜	Pantapec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3⅜	½
3⅛	⅝	7,700	3⅛	2½	2⅝	Ryan Consolidated	296,931	N.P.	....	.. ...	....	3⅜	⅞	4¼	⅝
10	5½	8,400	10	9	9⅛	Salt Creek Producers	1,496,859	$10	40cSA	12-31-35	1.20	7⅞	5½	9¼	3½
35¼	21⅝	2,800	34¼	33⅛	33⅛	South Penn Oil	1,200,000	$25	40cQ	12-28-35	1.35	26½	17½	22⅛	11
6½	3⅞	400	6½	5⅜	6½	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5½	3½	6	2⅛
56	44¼	100	54	54	54	Southwest Penna. Pipe Lines	35,000	$50	$1Q†	12-31-35	5.00	47	41	43	24½
24	18	4,900	22⅝	22	22⅛	Standard Oil of Kentucky	2,604,790	$10	25cQ†	12-14-35	1.25	18⅜	14⅝	19¼	8⅝
14⅝	7¾	1,800	14⅝	12½	13½	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	16⅞	8¼	20½	11
27⅜	11½	1,700	27⅜	26¼	26½	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
4¼	⅞	31,700	4	3⅝	3⅝	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	⅟₁₆	1½	⅛
9	5	7,700	9	8¼	8½	Texon Oil & Land	336,028	N.P.	15cQ	12-30-35	.60	11	4⅜	13¾	6¼
7½	2½	23,600	7⅜	6⅜	6¾	Texas Gulf Producing Co.	888,058	N.P.	....	12-29-34	....	7	3⅜	6½	3¾

•Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

PERSONAL

L. C. QUACKENBUSH, of New York, general sales manager for Tide Water Oil Company, has resigned to accept the presidency of the newly organized Alliance Oil Corporation of New York, marketers of bulk petroleum products in the domestic and export markets. The new corporation will coordinate the sales activities of a group of Pennsylvania refiners and will specialize in export sales at the outset. Mr. Quackenbush was associated with Tide Water Oil Company for 15 years, in charge of their wholesale and export markets.

J. C. DALLAS of Calgary, Alberta, recently made a business trip to Vancouver and other Pacific Coast points.

DON C. BOTHWELL, vice president of the Darby Petroleum Corp., Tulsa, was in San Antonio last week on a business trip.

GEORGE BENNETT, representative for the Hughes Tool Company, has been transferred from Hobbs, N. Mex., to Midland, Tex.

CAPT. E. N. STANLEY, in charge of the Railroad Commission forces at Kilgore, Tex., has resigned from that position to enter private business.

LOUIS SCHIRN, JR., was elected a director of the Jade Oil Company at the annual meeting of the company, succeeding G. J. SYMINTON.

C. O. RISON, Oklahoma City superintendent for Indian Territory Illuminating Oil Company, has been reelected chairman of the Oklahoma City chapter, American Petroleum Institute, Division of Production.

M. E. MONTROSE, Oklahoma representative of Lane-Wells Company, Los Angeles, Calif., spoke on "Oil Well Gun perforation Methods" at the meeting of the Purchasing Agents Association of Tulsa Tuesday night.

L. P. ST. CLAIR, president of the Union Oil Company, recently addressed the Pacific Coast Economic Conference at the annual meeting at Del Monte, which was attended by outstanding executives of large industries in California, Washington and Oregon.

G. F. SCHROEDER has been appointed assistant manager of the land and lease division of the producing department of the Standard Oil Company and will maintain headquarters in Los Angeles. Mr. Schroeder succeeds F. S. BRYANT, who was recently appointed manager of the exploration division of the producing department with headquarters in San Francisco.

EARLE E. SMITH, formerly in Tulsa with National Tube Co., has been promoted from assistant superintendent of field work to director of service in the operating department, with headquarters in Pittsburgh, Pa.

JACK LAMB, of the Gulf Refining Company, headquarters in Fort Worth, is on a trip to Washington, D. C., accompanied by MRS. LAMB, to attend a meeting of the North American Wild Life Association called by President Roosevelt. They will visit the head offices of his company at Pittsburgh, Pa., before returning to Fort Worth.

A. J. RENAUD, land man for the Continental Oil Company, has been transferred from Fort Worth to Houston where he will be in charge of the land department. M. J. BONHAM is being transferred from the San Antonio office and RALPH MANNING from the Ponca City office of the company to Fort Worth, both being connected with the land department.

M. E. WEBER, former operator in the Laredo district of Southwest Texas, has returned to San Antonio after several years' absence spent in California and Alaska.

A. G. TRAWALTER and W. L. UMBURN, operators in Southwest Texas, have formed the Nuswald Oil Company of San Antonio to carry on their operations in the Von Ormy field of Bexar County.

JAMES B. GRAHAM, formerly superintendent of field work, National Tube Company, Pittsburgh, Pa., has been made assistant general manager of sales with special duties in connection with the sale of oil country goods.

L. L. RECTOR, of the Rector Well Equipment Company, Fort Worth, was in San Antonio last week. Mr. Rector is making a survey of drilling operations in Southwest Texas, in contemplation of establishing a company branch in that area.

FLOYD S. BRYANT of the Standard Oil Company of California has been appointed manager of the exploration division of the producing department and in his new capacity will be charged with the responsibility of coordinating activities of the land and lease divisions.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

W. H. Davies of Siloam Springs, Ark., owner of a 1,000-acre orchard, uses oil burners to protect his fruit crop from frosts. He goes to Muskogee annually and arranges for his crude oil supply.

Col. W. W. McIlvane, age 75, father of R. W. McIlvane, manager of the Arkansas Natural Gas Co., dies in Denver.

John Galloway, veteran eastern field operator, is in Pine Bluff, Ark., leasing a big block of land. A well is being drilled on the block which found the first Caddo sand, dry, at 1,660 feet.

James R. Adams, said to have introduced the American system of drilling in the Caspian region, dies in Reno, Pa.

20 YEARS AGO

Pan American Petroleum Co. is organized with a capitalization of $150,000,000. The Mexican Petroleum Co., Petroleum Transport Co. and two other companies were merged to form the new organization.

Huasteca Petroleum Co. completes a 110,000-bbl. well, No. 4 Cerro Azul, in the south field in the Tampico district.

Nine persons were killed in an explosion of natural gas in Mexia, Tex.

10 YEARS AGO

C. K. Clarke is elected president of the Standard Oil Co. of Louisiana succeeding Dan R. Weller, resigned. Mr. Weller was elected a director of the Standard Oil Co. of New Jersey succeeding the late A. C. Redford.

Walker S. Estes, Tulsa oil and supply man, meets death in an airplane crash near Amarillo, Tex.

J. Edgar Pew has been elected president of the Beacon-Sun Oil Co. with large interests in Venezuela.

E. W. Marland, president of the Marland Oil Co., tells the Federal Oil Conservation Board that in his opinion there is no necessity for oil conservation as there is a sufficient oil supply to meet the demand for internal combustion engine fuel and lubrication for centuries.

Forty-seven pools in the United States produced 73 per cent of the total oil production in the United States in 1925. Smackover led all pools in production.

MISS EDITH CONYERS, in the land department of the Magnolia Petroleum Company, has been transferred from Oklahoma City to Midland, Tex.

D. M. CADE of Coffeyville, Kans., has been transferred to Odessa, Tex., to manage the West Texas and New Mexico office of the Oil Country Specialties Company.

VISCOUNT BEARSTED, chairman of the board of the Shell Transport & Trading Company, Ltd., returned to London last week after spending a month in New York City.

FRED MANNING, of Manning & Martin, Inc., drilling contractors, left Denver headquarters to inspect operations in the Cut Bank field, in Montana, where the company has several rigs working.

R. D. RICHARDSON, who has been supervisor of accounts of the manufacturing division of the Associated Oil Company at the Avon refinery, has been appointed assistant comptroller and in his new capacity will maintain headquarters in San Francisco.

J. L. DUNCAN, W. T. DUNCAN, ERNEST BROWN and CARLOS WAGNER, all of Duncan, Okla., have organized the Maxine Oil Company, which has leases in the Wildcat Jim field of Carter County. Mr. Brown is vice president of the Oklahoma National Bank at Duncan, and the others are oil operators.

CHARLES E. CLOWE, Ardmore, Okla., was elected president of the Southern Oklahoma Oil and Gas Association at the annual convention in Ardmore Saturday. LOUIS SIKES, Duncan oil operator, was elected vice president, and GEORGE C. GIBBONS, Ardmore, was named secretary-treasurer. WILL H. SMITH, Ardmore, is the retiring president.

PARAGRAPHS

W. R. S. JOHNSTON of Dallas, Tex., was in San Antonio last week viewing possibilities of opening drilling operations in Southwest Texas.

M. H. LEISTER, of the Sun Oil Company, Philadelphia, accompanied by MRS. LEISTER left New York City last week on a South American cruise.

FRANK M. ROOME, who has been the California representative of the Standard Oil Company of New Jersey since 1923, is returning to Tulsa, where he will join the land department of the Carter Oil Company following the closing of the California office of the Standard Oil Company of New Jersey.

G. E. WIMBERLY has just issued a new East Texas Oil Field Directory covering the East Texas fields, which gives the names of operators, pipe line companies, refineries, and other companies connected with the oil industry in the field. The number of wells and leases of each operator and company and their addresses are carried in the book, with names of superintendents or managers of the operators and companies, and their addresses. Copies of the directory can be obtained by writing "The East Texas Oil Field Directory," Box 442, Kilgore, Tex.

A. A. ARRAS, formerly at Fort Worth with Black, Sivalls & Bryson, Inc., has been moved to Shelby, Mont., where he will represent the company.

E. C. MURPHY, former manager of the Associated Tin Company's shop at Ranger, Tex., has been transferred to Odessa, Tex., to take charge of a new plant of the company.

TALLEY E. TIMMONS, of the Eastman Oil Well Surveying Company at Houston, Tex., has been transferred to Lake Charles as district manager in charge of operations in Coastal Louisiana.

JOHN R. SUMAN, vice president of the Humble Oil & Refining Company at Houston, was the principal speaker at a luncheon meeting of the Houston chapter of the American Institute of Mining Engineers.

R. L. COE, production superintendent in the Illinois field for Tide Water Oil Company, and MRS. HAZEL B. HEARD were quietly married at Mount Auburn Presbyterian Church in Cincinnati, Ohio, on Saturday, February 1.

B. O. HOWARD, of Laughlin-Simmons & Company, has been transferred from Tyler, Tex., to Shreveport, La., to take charge of the elevation service in that district. R. V. HENDERSON, formerly with U. S. Coast and Geodetic Survey, will replace Mr. Howard as assistant engineer to L. C. FORBIS at Tyler.

COL. F. M. STEELE, petroleum engineer of the Canadian department of the interior, recently addressed the Provincial Institute of Technology and Art and the Canadian Institute of Mining and Metallurgy at Calgary, Alberta, on his experiences in the Canadian North. Following the meeting DR. T. B. WILLIAMS of the institute staff, was host to the gathering at a supper.

HARRY F. HUFF, of the Atlantic Refining Company, Philadelphia, Pa., has been appointed member of the American Petroleum Institute's committee on marketing equipment. He succeeds C. H. EHLERS.

L. L. STEPHENS, general counsel for the Standard Oil Company (Indiana), Chicago, accompanied by MRS. STEPHENS, returns this week to New York City from California on the Santa Rosa of the Grace Line.

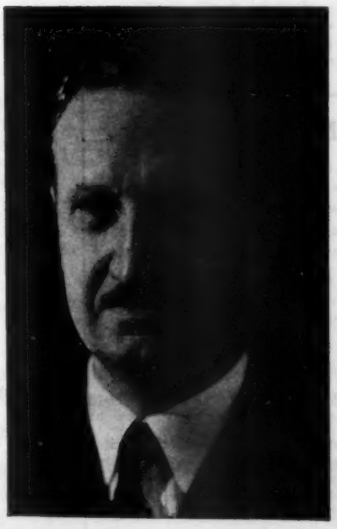
T. B. SCOTT, JR., recently joined the staff of the Carter Oil Company as assistant to the management in the Tulsa office. He will handle the investigation of special problems and the coordination of matters in which several departments of the company may be involved. For eight years, Mr. Scott has been associated with the Standard Oil Company of New Jersey in the New York office and has served there as contact man for both the Carter and Oklahoma Pipe Line Company.

T. RIEBER, chairman of the board of The Texas Company, whose portrait is here presented, and W. S. S. RODGERS, president, headed a party of 10 Texas Company officials on an inspection tour of the company's properties on the Gulf Coast last week. The party included R. OGARRIO, vice president in charge of production; HARRY T. KLEIN, general counsel; W. G. DUNNINGTON, director; W. S. GRAY, director; R. SHIELDS, director; HENRY U. HARRIS, director; BARKLIE HENRY, director, all of New York, and W. H. MITCHELL, director, Chicago, and L. J. NORRIS, director, St. Charles, Ill.

ED. H. MOORE of Tulsa spent a few days in San Antonio this week for business purposes.

Is Chief Legal Adviser

R. V. Le Sueur, vice president and director of Imperial Oil, Ltd., and vice president, director and chief legal adviser of its subsidiary, International Petroleum Company, Ltd., began his active association with the oil business in 1916, when he was sent to England by Imperial to supervise legal matters in connection with the purchase of producing oil fields in Peru for International. Later he was placed in charge of negotiations with the Peruvian government relating to the company's operations in that country. Since then he has served as head of International's legal staff, besides being made a director and vice president.



R. V. LE SUEUR

Mr. Le Sueur is a native of Sarnia, Ontario. He is a graduate of the University of Toronto and of the Osgoode Hall law school in that city. On completing his law course in 1903 he became a partner of the late W. J. Hanna, for many years legal adviser of Imperial Oil, Ltd., and subsequently president of the company. While practicing as a partner with Mr. Hanna Mr. Le Sueur gained a wide reputation as a corporation counsel and also in the field of criminal law. His thorough familiarity with corporation law led to his selection for the Peruvian assignment.

From 1921 to 1925 Mr. Le Sueur represented West Lambton in the Canadian House of Commons. Through his service in Peru, where International has about 2,000 producing wells and a modern refinery with large marketing outlets, including substantial export business, Mr. Le Sueur acquired a wide and detailed knowledge of the petroleum industry.

ROY LINDLEY, office manager of the Happy Belting Company, Tulsa, is making a business trip in Texas and Louisiana.

VAN D. BENNETT, of the Derby Oil Co., Wichita, Kans., is the proud father of VAN EMMERSON BENNETT, born January 29, 1936.

HERMAN F. DAVIES, district manager of the California Company, with headquarters at Denver, is in California on company business.

REX G. HAMAKER, vice president and sales manager of the Reed Roller Bit Company at Houston, is on an extended business trip to Mexico.

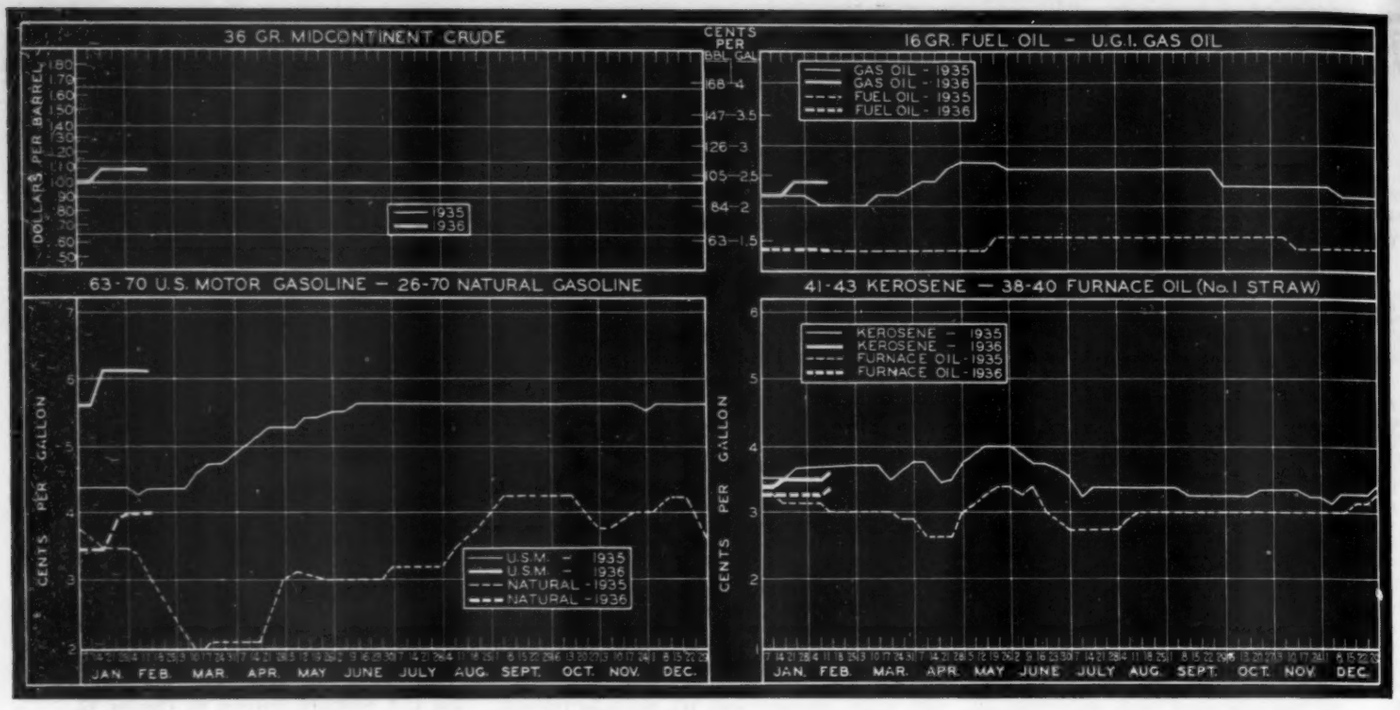
O. J. TUTTLE, sales manager for the Empire Oil & Refining Company, with offices in Tulsa, was a business visitor in Chicago during the latter half of the week.

R. W. McDOWELL, vice president and sales manager for the Mid-Continent Petroleum Corporation, spent several days in Chicago last week, returning to Tulsa Saturday.

G. A. HENDRICKS, district manager for Braden Steel Corporation, manufacturers of steel buildings for all oil country purposes, has opened up a Gulf Coast office at 626 Esperson Building, Houston, Tex.

R. C. BAKER, president of the Baker Oil Tools, Inc., of Huntington Park, Calif., spent several weeks in Houston acquiring an industrial site on which the company will build a large manufacturing plant.

J. STAIR, vice president of the Shell Petroleum Corporation of California, made an inspection tour of the company's holdings in Coastal Louisiana the past week, accompanied by T. E. SWIGERT, vice president of the company with headquarters at Houston.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER GAL
BBL
1935
1936
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE - 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE - 38-40 FURNACE OIL (No. 1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Group 3 Prices of Gasoline Hold in Spite of Unparalleled Conditions

By T. F. SMILEY

Ability of Group 3 gasoline tankcar prices to stand up this week in spite of travel conditions without parallel since the automobile supplanted the horse and buggy not only reflects the more cheerful trade psychology that prevails but is indicative of basic improvement in the quality of the market. The number of refiners who look upon price-cutting as a method of reducing topheavy inventories is much smaller than it used to be.

Might as Well Start Right

At the present moment even those refiners who are scanning the horizon for buyers show little or no disposition to try moving their material by offering concessions, a device to which they may have resorted with regularity aforetime. Two reasons for this seem evident. One is that the refiner knows there is about as much likelihood of finding purchasers at ruling quotations as there would be at cut prices. The other is that the conditions which created the existing congestion are seasonal, with the inevitable pickup only a few weeks off.

So a level-headed refiner sees no reason for entering the period of increasing demand in late March or early April with a disjointed market when a little patience and willingness of each one to take his share of temporarily poor business will make it possible to get off to a vigorous start. Preservation of this attitude, informed observers say, will go far toward making the summer motor fuel business of 1936 overshadow the excellent record made in 1935.

Right at this juncture consumer demand is so light that spot buying is near the vanishing point and orders on contract are at low ebb. Reports indicate, however, that notwithstanding snowstorms and extreme temperatures which have brought motor travel virtually to a standstill in much of Group 3's consuming territory, there are a surprisingly small number of inventories which could be put in the distress classification. Most of the heavy excess stocks are in the hands of large integrated companies, which have no intention of dumping them. Small independent refiners would like to find more outlets, but most of their surplus stocks are relatively small and are not regarded as constituting a serious market threat.

Independent refiners are credited with having contributed in great measure to the present hopeful conditions by cooperating in the movement to keep production in gear with demand. Five plants in East Texas were shut down this week. Others in North Texas and Oklahoma were closed. Such of these refiners as have crude production of their own were running the oil to storage or selling it to large pipe lines which needed it. There was reported to be a disposition to halt refining operations rather than add to unwanted gasoline.

Natural gasoline continued dull and virtually all the material moved was on contract. Some 12-pound material was finding buyers, but not at the prices which ordinarily bear a fixed relation to the 26-70 grade. Instead it was sold largely in competition with third-grade refinery gasoline.

Gasoline Market Blamed

The 4-cent price for 26-70 was reported to have been shaved an eighth in a few cases where the plants were in isolated locations and at a disadvantage in point of freight rates. The low state of the gasoline market gets the blame in large part for the current dullness in the naturals, although the price graphs of other years show this is not the season to look for impressive strength anyway. A few export inquiries were reported.

Furnace oils were active, stimulated by the very conditions which have deadened the motor fuel market. Their increased strength carried quotations up an eighth throughout the list. Kerosene benefited from the quickened demand for heating oils and it too was an eighth higher. Gas oil exhibited a steadier tone, presumably preliminary to the rising demand which it should enjoy a few weeks later with the broad resumption of cracking operations.

Fuel oils, which have been a subject of growing market interest in the last few weeks, maintained their advanced position, with prices stiffening.

Bright stocks were somewhat firmer, and some refiners predicted this product would be selling higher before long. Neutrals and steam-refined stocks were steady. Wax was strong at 2½ cents, with offerings extremely scarce.

Refined Oil Market Barometer

Notwithstanding paralyzed motor travel in large areas, gasoline prices have held. The market in this product was soft, however, and only reduced runs to stills, along with improved market practices, prevented a drop. Feeling is general that there will be no serious break before the spring pickup. Furnace oils and heavy fuels are benefiting from the cold weather.

MID-CONTINENT. Gasoline and naturals soft. Furnace oils and industrial fuels up.

EAST COAST. Furnace oil, gas oil, and diesel fuel stronger. Motor fuel quiet.

GULF COAST. Gasoline weak. Kerosene and heating oils stronger. Prices unchanged.

PENNSYLVANIA. Cylinder oils showing increased strength. Little change in other products.

CALIFORNIA. General market strengthening in expectation of crude oil curtailment.

CHICAGO. Fuel oil strong. Gasoline weak.

Low Temperatures Bolster Fuel Prices; Storm Slows East Coast Deliveries

By C. O. WILLSON

NEW YORK, Feb. 10.—Refinery prices on most grades of furnace oil, gas oil and diesel fuel moved up an additional one-fourth cent per gallon over the past week in response to a heavy demand from all parts of the eastern section of the United States. With low temperatures continuing both refiners and distributors were having difficulty supplying their customers in several areas.

The extremely cold weather and snow have brought complications in the matter of delivering the oil. Tank-wagon deliveries have been slowed up by the snow in the streets and the highways and refiners have had difficulty in keeping the bulk stations supplied at many points. This is particularly true along the coast where the refiners are accustomed to depend on barge deliveries throughout the winter. Many of these waterways are now frozen over and the refiners are dependent on tankcar and in some cases tank-wagons in supplying the distributors. The demand for oil it is said has been augmented at a few places due to a shortage of coal.

The base tankcar price in New York harbor area on Nos. 2 and 3 furnace oil, gas oil and diesel fuel (shore plants) is now 4¾ cents. No. 4 furnace oil is 4½ cents. These prices represent advances of one-fourth cent. The No. 1 furnace oil and range oil are unchanged at 5¼ cents. Similar advances were made at other tankcar and barge delivery points. Prices on barge deliveries are one-eighth cent under the tankcar prices.

While prices on residual fuels are generally unchanged it is predicted that quotations will be advanced within the next few days. The No. 5 grade at $1.25 and No. 6 at $1.05 are scarce. These grades are used both as heating and industrial fuels. Cold weather has increased the demands for these heavier oils and it is also claimed that there has been more industrial buying since the first of the year than there was in December. It is assumed that if these prices advance, Bunker C to the marine trade now quoted at $1.05 per barrel and diesel (marine) fuel at $1.65 will also be raised. Buyers at the close of the week said that the low on Gulf Coast Bunker C in cargo lots for coastwise movement was 80 cents with quotations ranging up to 85 cents. With tanker rates around 30 cents per barrel for movement to New York and Philadelphia, these base Gulf prices were pointed to as justifying an advance of at least 10 cents in the local Bunker C quotations. One distributor familiar with the market for light oils felt that refiners would be slow in making further advances in prices pointing that the peak demand for heating fuels will be over in another 30 days.

There were no other price changes of general importance. Kerosene continues as the "weak sister" of the refinery market in this territory, although tank-wagon prices were advanced at a few points in western New York.

The demand for the lower gravity fuel distillates has not aided the market for this product. Sellers in fact have not attempted to advance the No. 1 grade furnace oil, due, it is said, to the fact that some refiners are blending off kerosene with this fuel in order to get rid of the kerosene. Both the No. 1 furnace oil and water white kerosene are quoted over a price range of 5¼ to 5½ cents. The domestic demand for these products is showing a substantial increase due in part to the weather but the trouble so far as price advances are concerned, lies in the fact that several refiners have more kerosene on hand than they had a year ago and are not disposed to support price increases. The same situation applies at the Gulf Coast where a slow export movement compared to a year ago makes more material available for coastwise movement.

The accompanying table based on the December report of the Bureau of Mines shows the refinery output and stock situation for the eastern refinery district at the end of the year.

These data are of value in any study of price trends during December and since the first of the year. So far as crude runs to stills are concerned December operations were practically the same as December, 1934, and a similar situation applies to gasoline output. In the case of kerosene, however, it will be noted that production was much less in December than in December, 1934, reflecting the fact that the demand is less and stocks have accumulated. A year ago stocks of kerosene were low and the market was tight. At the close of 1935 these stocks were 700,000 bbls. greater than on the same date of the previous year. These data reflect a general situation at coastal points and explain why sellers have been faced with a weak kerosene market for several months.

The data on gas oil and distillate and residual fuels point to a more encouraging situation than is found in the case of kerosene. Production of these products in December was substantially greater than the previous year but the stock situation at the end of the year was favorable. Inventories of gas oil and distillate were down more than 1,000,000 bbls. and residual fuel oils, 3,000,000 bbls. With the heavy demand in January and so far in February it is certain there have been additional withdrawals from these inventories and this fact explains the price improvement of the past month. The lubricating oil situation shows little change so far as production and stocks are concerned.

Refiners continue to improve their wax inventory situation and at the end of the year the stocks on hand were 40 per cent less than the previous year.

Gasolines were as quiet as the fuels were active. Two sales managers, however, said that their tankcar deliveries were greater over the past week than they were the week before and sellers generally continue firm in their tankcar schedules. Breaks in the retail gasoline market are reported from day to day but so far no larger consuming area is involved. Efforts of distributors and jobbers to increase gallonage which has been slow due to the cold weather is blamed for the price cutting. Despite the cold weather two companies reported their January gasoline sales through their own stations and dealers were greater than January, 1935.

The state tax commisson has reported January collections of gasoline excise taxes in Oklahoma at $1,070,077.51, compared with $912,196.23 in the corresponding month of 1935, an increase of $157,881.28, or 17.31 per cent.

EAST COAST REFINERY OPERATIONS (Bbls.)

	December		Nov.,
	1935	1934	1934
Crude to stills (daily)	454,840	453,840	465,133
Gasoline	6,479,000	6,242,000	6,333,000
Kerosene	750,000	1,006,000	678,000
Gas oil and distillate	1,678,000	1,287,000	1,435,000
Residual fuel oils	4,552,000	3,954,000	3,558,000
Lubricants	736,000	658,000	717,000
Wax (lbs.)	20,160,000	19,320,000	18,760,000
Coke (tons)	2,000	11,000	1,600
Asphalt (tons)	74,000	51,700	94,200
Road oil	1,000	1,000	6,000

STOCKS END OF MONTH

Total gasoline	14,232,000	13,260,000	13,211,000
Kerosene	2,051,000	1,312,000	2,626,000
Gas oil and distillate	4,181,000	5,358,000	5,771,000
Residual fuel oils	4,252,000	7,165,000	6,990,000
Lubricants	2,227,000	2,216,000	2,169,000
Wax (lbs.)	33,067,000	57,154,000	24,765,000
Crude scale	17,057,000	22,965,000	18,018,000
Refined	16,010,000	34,189,000	16,747,000
Coke (tons)	17,500	23,900	18,700
Asphalt (tons)	127,900	95,300	121,600
Road oil	28,000	48,000	30,000

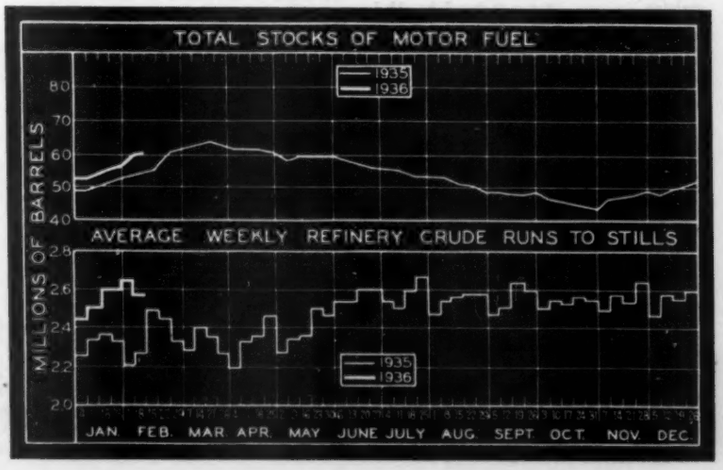
A. P. I. Weekly Refinery Statistics

Week Ending February 8, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	489,000	15,137,000	6,720,000
Appalachian	94.8	98,000	2,665,000	654,000
Indiana, Illinois, Kentucky	95.9	335,000	10,223,000	2,611,000
Oklahoma, Kansas, Missouri	84.8	261,000	6,734,000	2,960,000
Inland Texas	48.5	97,000	1,597,000	1,559,000
Texas Gulf	96.8	580,000	8,318,000	8,536,000
Louisiana Gulf	96.4	116,000	1,585,000	3,387,000
North Louisiana and Arkansas	90.0	43,000	370,000	582,000
Rocky Mountains	61.9	44,000	1,210,000	694,000
California	92.6	501,000	12,587,000	70,270,000
Total reporting	89.6	2,564,000	60,426,000	97,973,000
Estimated unreported	.....	.....	4,312,000	.....

Stocks (barrels)—	Feb. 8, 1936	Feb. 9, 1935
Total motor fuel	60,426,000	56,113,000

NOTE: In addition to above there are stocks classified as "Stocks of Other Motor Fuel." These stocks total around 5,500,000 bbls., but show only minor changes and are not included in this weekly summary.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of February 11, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Chicago	14.5	16.5	4.0	9.5
Decatur, Ill.	16.0	16.5	4.0	9.5
E. St. Louis	15.2	17.2	4.0	9.5
Joliet	16.0	16.5	4.0	9.5
Peoria	16.0	16.0	4.0	9.5
Quincy	15.5	17.5	4.0	8.0
Davenport, Ia.	16.0	(†)	4.0	9.5
Des Moines	15.5	(†)	4.0	9.5
Mason City	16.2	(†)	4.0	10.0
Sioux City	16.0	(†)	4.0	9.5
Duluth, Minn.	16.5	18.5	4.0	10.5
Mankato	16.4	18.4	4.0	10.2
Minneapolis	16.4	18.4	4.0	10.2
LaCrosse, Wis.	17.4	19.4	5.0	10.2
Green Bay	17.7	19.7	5.0	9.0
Milwaukee	15.5	17.5	5.0	10.1
Madison	17.4	19.4	5.0	10.2
Detroit, Mich.	14.0	16.0	4.0	8.0
Grand Rapids	16.4	18.4	4.0	8.0
Saginaw	16.6	18.6	4.0	9.2
Evansville, Ind.	17.7	19.7	5.0	10.3
Indianapolis	17.5	19.5	5.0	9.0
South Bend	18.1	20.1	5.0	8.0
Fargo, N. Dak.	17.4	19.4	4.0	11.2
Huron, S. Dak.	17.9	19.9	5.0	8.5
Sioux Falls	17.4	19.4	5.0	8.0
Kans. City, Mo.*	15.4	17.4	4.0	7.0
Springfield	15.1	17.1	4.0	8.9
St. Louis	15.7	17.7	4.0	9.5
St. Joseph*	15.4	17.4	4.0	8.2
Wichita, Kans.	14.9	16.9	4.0	6.8
Bartlesville, Ok.	17.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers: Undivided accounts, 3½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Stanolex Furnace Oil in Chicago

Effective June 27, 1935, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons and more, 7 cents. No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8.5 cents; 100-149 gallons, 7.5 cents; 150 gallons or more, 7 cents; No. 2 (30-34 stw. zero), same prices and quantities as No. 1; No. 3 (22-26 zero), less than 150 gallons, 7.2 cents; 150 gallons or more, 6.2 cents; No. 4 (12-16 zero), less than 400 gallons, 7.2 cents; 400 gallons or more, 6.2 cents, viscosity of No. 4, 85° and 100° F.; No. 5, less than 400 gallons, 5½ cents; 400 gallons or more, 4½ cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Pueblo	19.0	21.0	5.0	13.0
Grand Junction	21.5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	22.0	24.0	6.0	17.5
Billings	20.5	22.5	6.0	16.5
Helena	22.5	24.5	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	15.0
Boise	22.5	24.5	6.0	15.0
Albu'que, N. M.	21.0	23.0	*6.5	13.0

*One-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atlanta, Ga.	21.0	23.0	7.0	*14.5
Augusta	20.5	22.5	7.0	*14.0
Macon	20.5	22.5	7.0	*14.5
Savannah	18.5	20.5	7.0	*13.0
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	19.0	20.0	8.0	11.0
Montgomery	22.0	24.0	9.0	14.5
Jackson, Miss.	20.0	22.0	7.0	*13.0
Vicksburg	19.5	21.5	7.0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	12.0
Miami	19.5	21.5	8.0	13.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20.0	8.0	13.5
Lexington, Ky.	20.0	22.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	16.0	16.5	6.0	8.0

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
San Francisco	14.0	16.0	4.0	11.5
Los Angeles	11.5	13.5	4.0	10.5
Fresno, Calif.	14.5	16.5	4.0	9.0
Phoenix, Ariz.	18.0	20.0	6.0	‡16.0
Reno, Nev.	17.0	19.0	5.0	13.0
Portland, Ore.	16.5	18.5	6.0	13.5
Seattle, Wash.	16.5	18.5	6.0	13.5
Tacoma	16.5	18.5	6.0	13.5
Spokane	19.5	21.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4 cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent. ‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.3	17.8	4.0	9.0
Newark	13.8	16.8	4.0	7.5
Annapolis, Md.	15.6	19.1	5.0	10.0
Baltimore	15.0	18.5	5.0	8.5
Cumberland	16.6	20.1	5.0	12.7
Wash'g'n, D. C.	13.0	16.5	3.0	9.0
Danville, Va.	17.5	21.0	6.0	12.9
Norfolk	16.0	19.5	6.0	11.2
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W.Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	18.6	5.0	11.2
Wheeling	16.0	19.5	5.0	12.2
Charlotte, N. C.	18.7	22.2	7.0	12.9
Hickory	19.0	22.5	7.0	13.1
Mt. Airy	19.0	22.5	7.0	13.2
Raleigh	18.4	21.9	7.0	12.7
Salisbury	18.8	22.3	7.0	13.0
Charleston, S. C.	17.0	20.5	7.0	11.3
Columbia	18.3	21.8	7.0	12.6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Omaha	18.4	20.4	6.0	10.1
McCook	19.1	21.1	6.0	9.6
Norfolk	18.8	20.8	6.0	10.5
North Platte	19.2	21.2	6.0	10.9
Scottsbluff	19.9	21.9	6.0	11.6

Note: Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Philadelphia, Pa.	17.0	19.0	5.0	9.5
Pittsburgh	17.5	19.5	5.0	10.0
Allentown	17.0	19.0	5.0	9.5
Erie	16.5	18.5	5.0	9.0
Scranton	17.5	18.25	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	19.0	5.0	10.0
Wilmington	16.5	18.5	5.0	9.5
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	14.0	16.5	4.0	7.75
New Haven	14.0	17.5	4.0	7.5
Providence, R. I.	12.75	15.0	3.0	7.25

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
N. Orleans, La.	19.5	23.0	‡9.0	12.0
Baton Rouge	17.5	21.0	†7.0	11.5
Alexandria	18.5	22.0	††8.0	10.5
Lafayette	19.0	22.5	‡*8.0	12.5
Lake Charles	19.0	22.5	††8.0	10.0
Shreveport	18.0	20.5	†7.0	9.0
Knoxville, Tenn.	21.0	24.5	8.0	14.0
Memphis	19.0	22.5	8.0	9.5
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8.0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Post deal	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Albany, N. Y.	14.0	17.5	5.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	15.2	18.7	5.0	7.25
Staten Island	15.45	19 2	5.0	7.25
Qu'ns & Br'klyn	15.2	18.7	5.0	7.25
Buffalo	14.5	16.5	5.0	8.25
Rochester	14.5	18.0	5.0	8.25
Syracuse	14.5	16.0	5.0	8.75
Boston, Mass.	12.5	16.0	4.0	7.5
Portland, Me.	14.5	18.0	5.0	7.75
Manch'ter, N. H.	14.5	18.0	5.0	8.0
Burlington, Vt.	17.0	20.5	5.0	8.75
Hartford, Conn.	14.5	18.0	4.0	7.0

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	15.0	19.0	5.0	8.0
San Antonio	15.0	19.0	5.0	8.0
El Paso	16.0	20.0	5.0	10.0
Muskogee, Ok.	17.0	19.0	5.0	7.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	15.5	19.0	5.0	8.0
Little Rock	18.0	21.5	7.5	9.5
Texarkana	14.5	18.5	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 2-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline: Tank wag.	Gasoline: Serv. sta.	Gasoline: Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	30.8	33.8	7.0	22.3
Winnipeg, Man.	29.2	32.2	7.0	20.7
Regina, Sask.	30.5	33.5	7.0	22.0
Saskatoon, Sask.	33.3	36.3	7.0	24.8
Edmonton, Alta.	32.7	35.7	7.0	24.2
Calgary, Alta.	30.0	33.0	7.0	21.5
Vancouver, B. C.	26.0	29.0	7.0	24.0
Montreal, Que.	19.5	22.0	6.0	17.5
St. John, N. B.	25.5	29.5	8.0	20.0
Halifax, N. S.	25.5	29.5	8.0	20.0

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Retail Price Changes

Standard Oil Co. (Indiana) January 29 reduced tank-wagon kerosene 1.5 cents in Green Bay.

Continental Oil Co., January 30 advanced tank-wagon and station gasoline 3 cents in Salt Lake City.

Standard Oil Co. of Kentucky, January 21 advanced tank-wagon and station gasoline .5 cent in Lexington, Louisville, Jackson, Vicksburg, Birmingham, Mobile and Paducah; January 21 reduced tank-wagon gasoline 1 cent and advanced station gasoline .5 cent in Tampa and Jacksonville; January 22 advanced tank-wagon and station gasoline .5 cent in Miami and Pensacola; January 23 reduced tank-wagon and station gasoline 2 cents in Mobile; January 27 advanced tank-wagon kerosene 2.5 cents in Atlanta, 2 cents in Augusta and Jacksonville, 1.5 cents in Macon, 1 cent in Augusta and .5 cent in Pensacola; January 28 advanced kerosene 2 cents in Jackson and 1 cent in Vicksburg and on January 29 advanced kerosene 2.5 cents in Tampa, 1 cent in Mobile and Birmingham and reduced kerosene 1 cent in Montgomery; and on January 30 advanced tank-wagon gasoline .25 cent and station gasoline .5 cent.

Standard Oil Co. of New Jersey, February 5 reduced tank-wagon gasoline .5 cent and station gasoline 1 cent in Newark.

Standard Oil Co. of Louisiana, February 4 advanced tank-wagon kerosene 1 cent in New Orleans, the parish tax being removed.

Socony-Vacuum Oil Co., Inc., January 29 advanced posted dealer and station gasoline .2 cent in Metropolitan New York and .5 cent in Hartford; January 31 reduced station gasoline 2 cents in Syracuse and reduced posted dealer .5 cent and station gasoline 1 cent in Portland; February 5 advanced tank-wagon kerosene .25 cent in Syracuse; February 6 advanced kerosene .25 cent in Buffalo and Rochester; February 10 reduced posted dealer and station gasoline 1 cent in Albany; and on February 11 reduced gasoline 1.5 cent in Buffalo.

Imperial Oil, Ltd., February 3, advanced tank-wagon and station gasoline and tank-wagon kerosene .5 cent at all points except Vancouver, where no changes were recorded, and in Hamilton, Toronto and Montreal where gasoline prices were advanced 1 cent.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of February 11, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
Below 63 octane	.05¼	.05⅜
63-70 octane	.06⅛	.06¼
60-62 400 grade:		
Below 63 octane	.05¼	.05⅜
63-70 octane	.06⅛	.06¼
64-66 375	.05⅝	.50½
68-70 350	.05½	.05⅝

NORTH TEXAS—

U. S. Motor grades:		
Below 63 octane	.05¼	.05⅜
63-70 octane	.06⅛	.06¼
60-62 400	.05¼	.05⅜
64-66 375	.05⅝	.05½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:	
Below 63 octane	.05⅜
63-70 octane	.06⅜
60-62 400	.06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:	
Below 63 octane	.05⅜
63-70 octane	.06⅜

CHICAGO (based on Group 3)—

U. S. Motor grades:		
Below 63 octane	.05⅛	.05⅜
63-70 octane	.06⅛	.06⅜
60-62 400	.05¼	.05⅜
64-66 375	.05¼	.05½
68-70 350	.05⅝	.05⅝

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05⅜
60-64.9 octane		.07¼
65-70 octane		.07½
64-66 375		.05⅜
68-70 350		.06⅛

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.04	.05¼
58-60 400	.05	.06¼

EAST COAST—

U. S. Motor, below 60 octane:	
*New York (Bayonne)	.06⅜
Baltimore	.06⅜
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.07
Philadelphia	.07
Boston	.07
Baltimore	.06⅜
Charleston, S. C.	.06⅜
U. S. Motor, 65 and above:	
*New York (Bayonne)	.07¼
Philadelphia	.07¼
Boston	.07¼
Baltimore	.07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

Correction—Prices in issue of February 6 should have been as follows: U. S. Motor, below 60 octane, New York and Baltimore, 6⅜ cents; 60-64.9 octane, New York and Boston, 7 cents; 65 and above, New York and Boston, 7¼ cents.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05¼	.05⅜
60-64.9 octane	.05½	.05⅝
65 octane and higher		.05⅝

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05⅝
52-54 450 (blending)	.05⅝
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04⅝	.05
Low vapor pressure grade:		
*14 lb. v.p. (max.)	.05½	.05¾
*12 lb. v.p. (max.)	.05¼	.05⅜

NORTH TEXAS—

Grade 26-70		.03⅝
Grade 18-55	.04½	.04⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04¼	.04¼

CALIFORNIA—

75-85 375-390	.04⅝	.05

*Nominal.

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03⅝
42-44	.03⅝	.03⅝

NORTH TEXAS—

41-43	.03⅝	.03⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04¼

PENNSYLVANIA (inland refineries)—

45		.05¼
46		.05⅝
47		.05½

CHICAGO (based on Group 3)—

41-43	.03½	.03⅝
42-44	.03⅝	.03⅞

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

*41-43	.05¼	.05½

GULF COAST (domestic)—

41-43	.04¼	.04½

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.02½	.02⅝
No. 1 straw, 38-40	.03⅝	.03½
No. 2 straw, 32-36	.03¼	.03⅜
No. 2 dark, 32-36	.03¼	.03¼
No. 3, 28-32	.03	.03¼
No. 3, 15 and above, 28-32	.02½	.02⅝

NORTH TEXAS—

No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03⅝	.03½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03¼	.03¼

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03½
No. 3, 28-32	.03¼

CHICAGO (based on Group 3)—

No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅝	.03½
No. 2 straw, 32-36	.03⅝	.03½
No. 2 dark, 32-36	.03½	.03¼
No. 3, zero to 15, 38-32	.03	.03¼
No. 3, 15 and above, 28-32	.02¼	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1	.05¼
*No. 2	.04⅝
*No. 4	.04½

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¼	.02½
No. 4, 24-28	.90	.95
No. 4, 15 and above, 24-28	.75	.80
No. 5	.67½	.70
No. 6	.62½	.70
Below 18 fuel oil, industrial	.60	.65

NORTH TEXAS—

U.G.I. gas oil	.02¼	.02⅝
No. 4, 24-28	.90	.95
No. 5	.67½	.72½
No 6	.65	.70
Below 18 fuel oil, industrial	.60	.65

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.03
10-14 fuel oil, industrial	.75	.80

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (based on Group 3)—

U.G.I. gas oil	.02¼	.02⅝
No. 4, 24-28	.90	.97½
No. 4, 15 and above, 24-28	.75	.80
No. 5, 18-22	.67½	.70
No. 6, 10-15	.60	.62½

Fuel oils of more than 40 cold test generally 5 to 15 cents per bbl. in these areas.

PENNSYLVANIA (inland refineries)—

36-40	.04¼	.04⅝

CALIFORNIA—

Los Angeles:

30-34 gas oil, per bbl.	1.10	1.25
27 plus diesel	1.05	1.20
27 plus diesel (bunkers)	1.15	1.25
12-16 (bunkers at tidewater)	.83	.92
10-16 (cargo lots)	.80	.89
12-17 (tankcars)	.85	.95
San Joaquin Valley:		
10-18 (tankcars)	.60	.75
San Francisco:		
27 plus diesel, per bbl.		1.25
27 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅝
28-30 diesel (bunkers)		1.70
Bunker C (bulk cargoes)		.75
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04½
28-30 diesel (lighterage 6¾ plus per bbl.)		1.65
28-30 diesel (tankcars)		.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.05
Industrial fuel (tankcars)		.04¼

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.20
150-160 D, 0-10		.17
150-160 D, 15-25		.16½
150-160 E, 15-25		.16
100-110 D, 0-10		.15⅝
Steam refined:		
630 green (treated)		.10
600 light green, untreated		.08½
600 dark green, untreated	.06	.07

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.22	.22½
15 pour test	.21	.21½
20 pour test	.20	.20½
25 pour test	.19	.19½
Steam refined:		
600	.10	.10½
650	.11½	.12
600 Pennsylvania flash	.12½	.13
630 flash	.17½	.18
600 Warren E filtered	.13½	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.10
180-3		.11⅛
180-4		.10⅝
200-3		.11⅝
200-4		.11⅛
250-3		.13⅝
250-4		.13⅛
280-3		.14⅝
280-4		.14
300-3½		.15⅛
400-3½		.16
100-2 paraffin oil		.05⅝
15-20 Cold Test:		
200-3		.10⅝
200-4		.10⅛
240-3		.12⅝
240-4		.12⅛
280-3		.13⅝
250-4		.13

GULF COAST—

Pale Oils:		
200-3	.07	.07½
300-3	.07½	.08
500-3½	.08½	.09
750-3½	.09	.09⅛
1,200-3½	.09⅛	.09⅝
2,000-4	.09⅝	.10
Red Oils:		
200-5-6	.07	.07⅛
300-5-6	.07⅛	.07½
500-5-6	.08	.08⅛
750	.08½	.09
1,200-5-6	.09	.09⅛

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3	.06⅛	.06⅝
200-2½-3	.06⅝	.07
300-3-3½	.07	.07⅛
400-3-4	.09	.09⅛
450-3-4	.09⅝	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5	.06½	.06⅝
300-5-6	.06⅝	.07
350-5-6	.07	.07⅛
400-5-6	.08	.08¼
450-5-6	.08¼	.08⅛
500-5-6	.08⅛	.08⅝
600-5-6½	.09	.09⅛
700-6½ plus	.09½	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10¼

PENNSYLVANIA—

150 vis. at 70° F., color, 400-405 flash:

Zero pour test	.20	.20½
10 pour test	.19	.19⅛
15 pour test	.18½	.19
25 pour test	.17½	.18
180 vis. at 70° F., 3 color:		
25 pour test	.20½	.21
200 vis. at 70° F., 3 color:		
Zero pour test	.24½	.25
10 pour test	.23½	.24
15 pour test	.23	.23½
25 pour test	.22	.22½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0230	.0235
124-126 (a.m.p.) w.c. scale	.0235	.0240

NEW YORK—

Wax in bags fully refined:		
123-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0525
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0230	.0235
124-126 (a.m.p.) y.s	.0225	.0230
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06⅞
Snow white	.07⅛	.07⅝
Cream	.05⅝	.05⅞

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.05⅝	.05½
60-62 400		.05½
61-63 390		.05⅝
64-66 375		.05⅝

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¼
55-65 octane	.04¼	.04½
65-67 octane	.04½	.04⅝
67-69 octane	.04⅝	.05
Above 69 octane	.05	.05⅛
58-60 400 endpoint	.05¼	.05⅝

KEROSENE

GULF COAST—

41-43 prime white		.03⅝
41-43 water white	.03⅝	.04
44 water white		.04½

LOS ANGELES—

41-43 water white	.04½	.04⅝

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.b. in bbls.)—

Cylinder Stocks:	
600 Warren E	.20
600 S.R. unfiltered	.16½ .17
650 S.R. unfiltered	.17⅛ .18
600 flash S.R.	.18½ .19
630 flash S.R.	.23½
Bright Stocks:	
8 color	.26
6½ plus color in dilution	.25½

NEUTRAL OIL

200-3 color	.29	.29½
150-3 color	.25	.25½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.03875
125-127 a.m.p.		.04
128-130 a.m.p.		.0450
133-135 a.m.p.		.05
135-137 a.m.p.		.0525
Crude scale:		
124-126 w.s.	.0225	.0230
124-126 y.s.		.0225

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .90
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.23
Torchlight, Wyo.*	1.23
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light*	.82
Hogback, N. Mex.*	1.21
Pondera, Mont.* (Jan. 29, 1936)	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1933)‡	.75
Maljamar, N. Mex. (Sept. 29, 1932)‡	.75
Fort Collins and Wellington, Colo.‡ (Jan. 9, 1936)	See Note
Florence, Colo.	.93
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.85
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont.	1.25
Cat Creek, Mont.	1.28
Cat Bank, Mont. (May 23, 1934)	1.45

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Handin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La.	1.00
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duvall by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (Jan. 13, 1936)*	1.32
West Branch, Mich. (Nov. 7, 1935)	.96
Muskegon, Mich.	1.00
Ogemaw, Mich.	1.06
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co., Simrall Pipe Line Co. Ogemaw and West Branch, Mich., by Simrall Pipe Line Co. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$ .75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana. El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.

(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:

Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on lengths of pipe line haul to plant at Oil City.	2.36

PURE OIL CO.

(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.13
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .85

*F.o.b. ship, based on December transactions and exclusive of production and export taxes and bar dues.

Crude Oil Prices by Gravities

Gravity—	1 Oklahoma, Kansas, and Salt Creek, Wyo.	2 Central and North Texas	3 East Central Texas	4 East Central Texas	5 North Louisiana, Arkansas	6 Gray County Texas	7 Carson and Hutchinson Counties, Texas	8 Conroe, Texas	9 West Texas and Lea County, New Mexico	10 Gulf Coast, Texas and Louisiana	11 Anahuac and Dickinson, Texas	12 Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	$.84	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.86	.83	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.88	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.90	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.92	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.94	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.96	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	....	$.96	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	.98	1.00	.98	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.00	1.02	.98	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.02	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.04	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.06	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.08	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Column 1—Effective January 9, 1936—Companies starting schedule below 29 gravity are Stanolind, Anderson-Prichard, Bell, Barnsdall, Champlin, Continental, Deep Rock, Dickey, Eason, El Dorado, Empire, Flacon, Globe, Gypsy, Johnson, Kan-O-Tex, National, Pepper, Sunray, Texas, Tide Water, Twin State, Vickers, White Eagle. Starting below 35 gravity are Carter, Magnolia, Pure, Rock Island, Shell, Sinclair Prairie and Skelly companies.

Column 2—Effective January 9, 1936—Humble Oil & Refining Co. and adopted by all purchasers.

Column 3—Effective January 9, 1936—Humble Oil & Refining Co. and Sinclair Prairie Oil Marketing Co.

Column 4—Effective January 9, 1936—Magnolia Petroleum Co.

Column 5—Effective January 16, 1936—Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co. and Stanolind Oil and Gas Co. Magnolia, effective January 16, starting at below 29 gravity 86 cents.

Column 6—Effective January 9, 1936—Led by Humble Oil & Refining Co. Adopted by all buyers.

Column 7—Effective January 9, 1936—Led by Humble Oil & Refining Co. Adopted by all buyers.

Column 8—Effective January 9, 1936—Led by Sun Oil Co. Adopted by all buyers.

Column 9—Effective January 14, 1936—Humble Oil & Refining Co. Does not include Pecos County. Effective January 14 by Texas Co.; January 16 by Magnolia Petroleum Co.; January 23 by Shell Petroleum Corp.

Column 10—Effective January 9, 1936—Led by Sun Oil Co. Adopted by all buyers. Texas Co. starts schedules at below 18 gravity 88 cents.

Column 11—Effective January 9, 1936—Humble Oil & Refining Co.

Column 12—Effective January 9, 1936—Magnolia Petroleum Co.

Texas March Output

AUSTIN, Tex., Feb. 10.—The Railroad Commission has called its monthly statewide oil and gas proration hearing for February 18.

Allowable reductions invoked last month in four Southwest Texas fields were restored. The changes, effective February 1, were: Greta, raised from 12,930 to 14,930 bbls.; Dirks from 3,775 to 4,680 bbls.; North Government Wells, from 10,800 to 11,763 bbls., and South Government Wells, from 5,550 to 6,044 bbls.

A special hearing was set for February 14 to consider oil and gas rations in Clarkwood and Saxet areas in Nueces County. Operators with wells having gas ratio of more than 3,000 feet to 1 bbl. of oil were directed to present detailed information concerning the production.

A drilling regulation limiting wells to 660 feet from another well and 33 feet from a property line was set for Placedo in Victoria County.

Potential test rules were reissued for a few new tests in the East Texas field.

January Auto Output

The Automobile Manufacturers Association reports the total output of association members set a new record for January, 276,350 cars and trucks—an increase of 36 per cent over January last year. The best previous January output for the group was in 1929 when 269,812 units were produced. Last month's output was 14 per cent under December's production. The estimate, which covers the operation of all but one of the major automobile producers in the United States, is based upon reports of factory shipments.

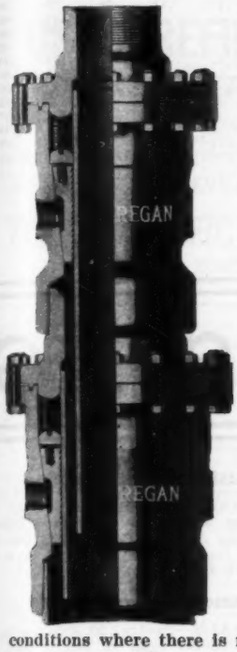
Gulf Refining Change

PITTSBURGH, Feb. 10.—In line with the reorganization and consolidation of its numerous subsidiaries, Gulf Oil Corp. is dissolving the Gulf Refining Co., Inc., of Texas, turning over its operations to Gulf Oil Corp. of Pennsylvania. A. J. Guthrie, secretary and associated general counsel, said: "The move is purely an internal adjustment and involves no change in personnel or financial management."

NEW OR IMPROVED EQUIPMENT

Regan Slip-Type Casinghead Is Introduced in Two Models

Regan Forge & Engineering Co., San Pedro, Calif., has developed a slip-type casing control head made in two models. Weight of the successive strings of casing is used to assist the bolts in packing off the pressure between the strings. The flanges, being in contact with the packing unit, enable an operator to adjust the packing from the outside at any time.



Any increase in pressure between the strings is automatically taken care of by a lower packing-ring, which under the between-strings pressure, acts as a piston and increases the outward and inward pressure of the lips of the packing-rubber against the inner casing and against the wall of the control head.

The Regan B G slip-type casinghead is furnished in two models, spool type and male-and-female type. The spool type is for conditions where there is no variation in the casing program. The male-and-female type is for fields where conditions are not definitely known and casing programs may vary. These are furnished for 3,000- and 6,000-pound test pressures.

Here and There With Men Who Manufacture Equipment

G. J. Goodson has been appointed Mid-Continent manager of Bradford Motor Works, Inc., oil-well supplies, Bradford, Pa. His headquarters will be in Tulsa.

Waukesha Motor Co. has placed distribution of its oil-well pumping and stationary engines for the oil industry in California in the hands of Frazier-Wright Co., 2315 South Hill Street, Los Angeles, Calif. Its drilling and well-servicing engines will be handled by the manufacturers as in the past.

Neil Currie, Jr., for six years manager of the General Electric Co.'s Philadelphia works, has been made manager of its Fort Wayne works. R. V. Good, assistant manager at Philadelphia, succeeds Mr. Currie.

George W. Stevens has been appointed sales engineer for the Novo Engine Co., Lansing, Mich., with headquarters at 3441 Westminster Street, Dallas, Tex.

Charles W. East has been appointed district sales manager for Republic Steel Corp. in Houston, Tex. R. H. Sonneborn has been made special sales representative of the company's tubular division, with headquarters in the Republic Building Cleveland, Ohio.

The McGregor Engineering Co., Midco Building, Tulsa, has been appointed representative in Oklahoma and southeastern Kansas for the Oceco division of Johnston & Jennings, Cleveland, Ohio, manufacturer of tank fittings. William H. McGunagle, formerly Oceco representative in Tulsa, has been transferred to the factory in Cleveland, Ohio, to handle special work.

George Dandrow has been made manager of the New York district of Johns-Manville Corp.'s power products and industrial department, with offices at 22 East Fortieth Street, New York.

Industrial Glass

Under the auspices of Joe Stevens, sales manager of Gustin-Bacon Manufacturing Co., A. D. Saborsky and Frank L. Myers of the Owens-Illinois Glass Co. were speakers on glass and its industrial uses at the weekly meeting of the Engineers Club of Tulsa. Mr. Myers is identified with the filter division of his company, and Mr. Saborsky is in the insulation division. The Owens-Illinois Glass Co. are pioneers in the development of fibrous glass. Among its uses in the oil industry are for oil filters, oil filters for engines, process filters for refineries and insulation for piping, stills, boilers, etc.

The Gustin-Bacon Manufacturing Co. of Kansas City are distributors for the insulation division of Owens-Illinois, and the National Supply Co. distributors for air filters.

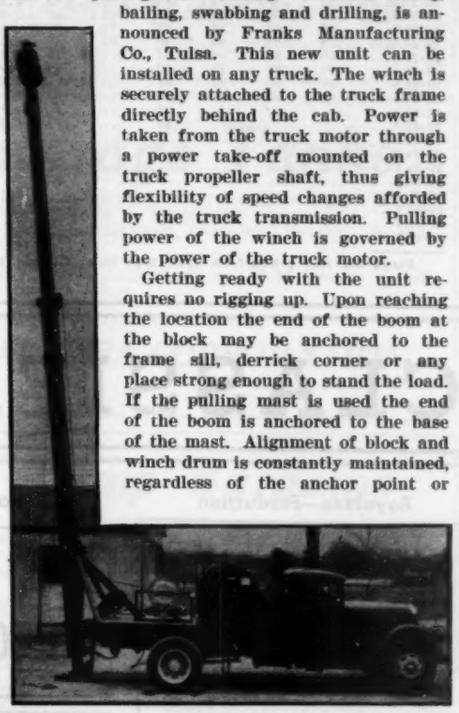
Men Widely Known in the Equipment Field

G. L. SMITH

G. L. Smith, recently appointed assistant sales manager of the Republic Rubber Co., Youngstown, Ohio, has been with Republic 13 years, joining the organization as salesman in eastern and northern New York. His territory gradually was enlarged to include all of New England and the New York metropolitan area. He is credited with having placed more accounts on the company's books than any other field man in the organization.

Motor-Driven Portable Winch Placed on Market by Franks

A portable motor-driven oil-well servicing winch, which makes any truck a fast powerful unit for pulling and running rods and tubing, bailing, swabbing and drilling, is announced by Franks Manufacturing Co., Tulsa. This new unit can be installed on any truck. The winch is securely attached to the truck frame directly behind the cab. Power is taken from the truck motor through a power take-off mounted on the truck propeller shaft, thus giving flexibility of speed changes afforded by the truck transmission. Pulling power of the winch is governed by the power of the truck motor.



Getting ready with the unit requires no rigging up. Upon reaching the location the end of the boom at the block may be anchored to the frame sill, derrick corner or any place strong enough to stand the load. If the pulling mast is used the end of the boom is anchored to the base of the mast. Alignment of block and winch drum is constantly maintained, regardless of the anchor point or tilt of the truck. A horizontal boom telescopes directly out from the back of the truck. This boom is entirely arc welded with shielded arc equipment manufactured by Lincoln Electric Co., Cleveland, Ohio. This boom at the block end can be telescoped far enough away from the drum to assure correct spooling of the cable. The boom, once the job is done, is placed in road position, interfering with neither truck bed nor draw bar.

Bethlehem Steel Paving Plates Expected to Find Wide Use

Bethlehem Steel Co., Bethlehem, Pa., has placed on the market a new type of permanent and protective surfacing for concrete floors and paving, designated Bethlehem steel paving plates. Designed for installation on the surface of concrete slabs to which they are anchored, they are expected to find wide use in the oil industry.

These paving plates are on one-eighth inch rolled steel, and are available in two sizes. One is intended for use on roadways; the other for plant floors, loading platforms, and docks. The two types are identical, except that the one for roadways is equipped with button-head studs, making it a nonskid plate. The sides are perpendicular to the surface, and are so crimped as to give the plates firm anchorage in the concrete. Additional anchorage is provided by studs which extend into the concrete. And, when these plates are laid the fresh concrete fills the slots to the top of the plate, providing additional bond between concrete and plate and at the same time increasing its nonskid surface.

The floor-type paving plate has a smooth surface, the long-shank anchorage studs, with flat heads, fastening through countersunk holes, making them flush with the top surface of the plate.

STANDARD OIL CO. OF CALIFORNIA

Effective December 6, 1935, and met by all other purchasers. (Ventura Avenue and Beirdge posted by Associated Oil Co.; Rincon by General Petroleum Corp.) All gravities above those posted take highest posted price in the field.

Gravity—	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canon	Athens Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Kettleman Hills	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Ventura Avenue	Rincon	Beirdge
14-14.9	$.75	$.74	$.73	$.74	$.75	$.71	....	....	$.75	$.71	....	$.71	$.72	$.73	....	$.65	....	$.65	$.65	$.65	....	....	....	.6o
15-15.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
16-16.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
17-17.9	.75	.74	.73	.74	.75	.71	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
18-18.9	.75	.74	.73	.76	.75	.73	....	....	.75	.71	....	.71	.72	.73	....	.65	....	.65	.65	.65	....	....	....	.65
19-19.9	.75	.74	.74	.77	.76	.75	....	....	.77	.71	....	.71	.72	.73	....	.65	$.65	.66	.66	.66	$.65	....	....	.68
20-20.9	.76	.74	.76	.79	.79	.77	....	....	.78	.71	....	.73	.72	.73	....	....	.65	.68	.71	.67	.65	....	....	.71
21-21.9	.78	.76	.78	.81	.81	.79	....	....	.80	.71	....	.75	.72	.75	$.73	....	.65	.71	.73	.69	.65	....	....	.72
22-22.9	.80	.76	.80	.82	.84	.81	....	....	.81	.73	....	.77	.73	.77	.73	....	.66	.74	.75	.71	.67	.73	.69	.75
23-23.9	.82	.77	.82	.84	.86	.83	$.79	....	.83	.75	....	.79	.74	.79	.73	....	.67	.77	.77	.73	.69	.75	.71	.77
24-24.9	.84	.80	.84	.86	.88	.84	.81	....	.84	.77	....	.80	.76	.81	.75	....	.69	.80	.80	.75	.71	.77	.73	.80
25-25.9	.86	.82	.86	.87	.91	.86	.83	....	.86	.79	....	....	.78	.82	.77	....	.71	.83	.82	.77	.73	.79	.75	.82
26-26.9	.88	.85	.88	.89	.93	.88	.86	....	.88	.81	....	....	.80	.84	.79	....	.73	.86	.85	....	....	.81	.77	.85
27-27.9	.90	.88	.90	.91	....	.90	.88	....	....	.83	....	....	.82	.86	.82	....	.76	.88	.88	....	....	.83	.79	.88
28-28.9	.92	.90	.91	.92	....	.92	.90	....	....	.85	....	....	.82	.88	.84	....	.78	.91	.90	....	....	.85	.81	.90
29-29.9	.94	.92	.93	.94	....	....	.93	....	....	.87	....	....	.85	.90	.86	....	.80	.94	.92	....	....	.87	.83	.92
30-30.9	.96	.95	.96	.95	....	....	.05	....	....	....	....	....	.87	.92	.89	....	.83	.97	.94	....	....	.89	.85	.94
31-31.9	....	....	....	.97	....	....	.97	....	....	....	....	....	.89	.94	.91	....	.85	.99	....	....	....	....	....	.95
32-32.9	....	....	....	.99	....	....	1.00	....	....	....	....	....	.91	.96	.93	....	.87	1.02	....	....	....	....	....	.96
33-33.9	....	....	....	....	....	....	....	$.99	....	....	$.95	....	.93	.98	.95	....	.89	1.04	....	....	....	....	....	.97
34-34.9	....	....	....	....	....	....	....	1.01	....	....	.97	....	.95	1.00	.96	....	.91	....	....	....	....	....	....	.98
35-35.9	....	....	....	....	....	....	....	1.03	....	....	.99	....	.97	....	1.00	....	....	....	....	....	....	....	....	.99
36-36.9	....	....	....	....	....	....	....	1.05	....	....	1.02	....	.99	....	1.03	....	....	....	....	....	....	....	....	1.01
37-37.9	....	....	....	....	....	....	....	1.07	....	....	1.05	....	1.00	....	1.04	....	....	....	....	....	....	....	....	1.03
38-38.9	....	....	....	....	....	....	....	....	....	....	1.08	....	1.03	....	1.07	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	....	....	....	....	....	....	....	1.11	....	1.05	....	....	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....	....	....	....	....	....	....	....	....	1.07	....	....	....	....	....	....	....	....	....	....	....

Playa Del Rey prices f.o.b. their pipe line. Elwood Terrace prices f.o.b. ship.

CLASSIFIED ADVERTISING

Royalties—Production

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

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ROYALTIES and leases in all fields, producing and nonproducing. Kans., Okla., Tex. Get my list before buying. JAMES R. HAYNES, Grantville, Kans.

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Will buy, sell or quote.
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F. W. FREEBORN ENGIN'R'G CORP.
Appraisers—Engin'rs—Operators—Mgrs.
For the Oil and Gas Industry.
Alexander Building, Tulsa, Oklahoma.
Consultants for Royalty Buyers.

There's probably more oil left in your old field than you've taken out; 2½ years research and laboratory tests show most of such oil easily recovered. Can demonstrate. Independent producers preferred. Address Box H-133, The Oil and Gas Journal, Tulsa, Okla.

WINKLER COUNTY ROYALTY—BLK. 3 & 5. Private owner desires to sell nonproducing holdings. If interested write F. R., 17 Howell Pl., Kearny, N. J.

Royalties—Production

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All royalty offerings originated through one responsible field staff with more than 15 years experience. Where established dealers not available, will train experienced and reputable security men to establish own dealer business in compliance with all legal requirements. Exclusive territory. Practical cooperation. Wholesale only.

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17 East 42nd St., at Madison Ave., New York City
Continuing the business of Otte & Co.—Founded in 1907.

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Drilling Blocks Supported by Geophysics, Geology and Financial Assistance Now Ready. Responsible Independent Operators Contact.
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MONTHLY PAYING ROYALTIES on which we have filed SCHEDULES A with the SEC at WASHINGTON. Quoted Dealers Exclusively.
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Suite 812, Palace Bldg., Tulsa, Okla.

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(ALL FIELDS)
Bought, Sold and Quoted.
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207 Van Nuys Bldg.,
Los Angeles, Calif.
Telephone Trinity 7391.

PRODUCING OIL ROYALTIES
Bought (Wholesale) Sold.
Inquiries invited from Oil Companies, Bankers, Dealers.
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20 Broad St. New York

PRIME POTENTIAL ROYALTIES under and/or offsetting drilling wells. Wholesale exclusively. L. E. Morency, Hunt Bldg., Tulsa, Okla.

RODESSA OVERRIDING ROYALTY INTEREST
Will consider selling 1/18th of the ⅞ths working interest converted into overriding royalty under the Layton-Tyson No. 1 well, Rodessa field, center of Sec. 22-T. 23N-R. 16W, Caddo Parish, La. Under 500 bbl. daily allowable and present price oil this interest should return approximately $725.00 monthly. Want firm cash bids.
WILLIAM MONROE LAYTON
67 Wall Street New York City

Royalties—Production

Van—East Texas—Louisiana Royalties Bought—Sold.
WILLIAM MONROE LAYTON
67 Wall St., Suite 1510, New York City.

POTENTIAL OIL FIELD awaits develop. Struct. apprvd. by numerous recognized geol. Liberal acreage. Capital wanted. Chamber of Commerce, Benson, Ariz.

FOR IMMEDIATE action, 75,000 acres solid, long considered by geologists as one of New Mexico's largest and most promising structures, has a geophysical and structural high fourteen miles in length, from drilling already done proves closures, big production is expected from some of seven horizons that should produce, owner desires assistance to complete development or will turn property to responsible party. No other need answer. Write
P. O. BOX 11
Santa Fe, New Mexico.

INVESTORS want to make money in Oil? Write for details my profit plan. Address Box H-121, The Oil and Gas Journal. Tulsa, Oklahoma.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Oklahoma.

WITWER'S OIL ROYALTIES
Producing & Non-Producing.
L. H. Witwer,
P. O. Box 2453 Tulsa, Okla.
565 First Natl. Bldg., Okla. City, Okla.

Have 8,000 acres 100 miles from Houston. Good surface geology indicates probable shallow production. About $20,000 in all required to see sand. Only operators with cash need answer. James P. Williams, 2000 Esperson Bldg., Houston, Tex.

Producing and Non-Producing Royalties.
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Wholesale — Retail.
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76 Beaver Street, New York City.

VAN POOL — EAST TEXAS
Bought — Sold — Wholesale.
W. R. Brown & Co., Inc.
14 Prospect Pl., East Orange, N. J.

I BUY AND SELL oil royalties and producing wells, East Texas field. B. A. SKIPPER, Longview, Texas.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

Ranches—Farm Lands

FOR SALE—Several 40 acre tracts of cut over timber land in North part of McCurtain County, Oklahoma, for $75 per 40 acres. Good title, all taxes paid. Luther Calahan, Idabel, Oklahoma.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Help Wanted

Petroleum Technologist — Major company has opening for technologist with a minimum of four years' experience in technical supervision of refinery technology and design of equipment. In reply give age, education, details of experience, and enclose photo. Address Box H-112, The Oil and Gas Journal, Tulsa, Okla.

Situations Wanted

Refinery Supt. 10 yrs. experience skimming, cracking, vacuum equipment, road oils and asphalts. Address Box H-130, The Oil and Gas Journal, Tulsa, Okla.

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10 years experience, draftsman, checker, estimator, designer and some executive experience, with major refinery designers and contractors. Age 32. Prefer connection with refiner. Address Box H-132, The Oil and Gas Journal, Tulsa, Okla.

CHEMICAL Engineer, petroleum chemist, with outstanding mechanical engineering experience in designing and developing equipment, wants position with engineering, development or operating department of major oil refining unit or oil producing interest. Address Box H-142, The Oil and Gas Journal, Tulsa, Oklahoma.

Refinery Superintendent—Grad. chem. engineer, 9 yrs. experience design and operation of cracking, road oil, asphalt, vapor recovery plants. References. Available Feb. 20. Address Box H-141, The Oil and Gas Journal, Tulsa, Oklahoma.

Used Refinery Equipment

Dismantling two large modern refineries located in Oklahoma and Texas. Everything from a Cracking Still to a Filling Station Pump. Thousands of items. Send for latest illustrated catalog. Get our quotations and see how much you save.

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USED REFINERY EQUIPMENT

FOR SALE AT FORT WORTH REFINERY

The Texas Pacific Coal and Oil Company offers for sale beginning February 1, 1936—cracking stills, crude stills, bubble towers, boilers, compressors, pumps, tanks, pipe, valves, fittings, instruments, etc.

INQUIRIES ARE INVITED—WRITE, WIRE OR PHONE

TEXAS PACIFIC COAL & OIL COMPANY

FORT WORTH, TEXAS

Everything in Refinery Equipment

The Altitude Refinery at Chanute, Kansas.
The Marathon Refinery at Boynton, Oklahoma.
The Sinclair Refinery at El Paso, Texas.
The Pure Oil Refinery at Ardmore, Oklahoma.

Everything for sale in these plants. ALL of our EQUIPMENT is RECONDITIONED. Inventories on request. Pressure tanks and Hot Oil Pumps our specialty.

Wire — Phone — Write

W. C. BERRY —or— H. J. GALAMBA

SONKEN-GALAMBA CORPORATION

64 North Second Street Kansas City, Kansas

Steel Storage Tanks

We will erect latest type 55,000 bbl. all steel storage tanks at a great saving. Over 500 tanks on hands from 500 bbls. to 80,000 bbls.
Four 55,000 bbl. all steel tanks near Seminole, Oklahoma, for rent, we own ground and pipe connections.

We can furnish any quantity of steel tank sheets from 3/16 inch to ½-inch inclusive in carload lots at bargain prices.

Wire—Phone—Write—W. C. Berry

SONKEN-GALAMBA CORPORATION

64 North Second Street Kansas City, Kansas.

Hot Oil Pump Bargains

4—10" x 9" x 12" Horizontal, Duplex, Hot Oil Pumps, manufactured by the Dow Pump & Diesel Engineering Co., Ball valves of stainless steel, capacity 210 g.p.m. against 35 lbs. pressure, for oil having a temperature as high as 900°, located at Ardmore, Oklahoma.

SONKEN-GALAMBA CORPORATION

64 N. Second Street Kansas City, Kansas.

Three—300 amp. Lincoln Engine driven welders. A-1 condition. Stationary type. Service Co., 3732 Cedar, Cleveland, Ohio.

SEVERAL USED ROTARY RIGS $3000 to $30,000.
Several Steel Derricks & Rotary Equip. J. S. Daniel, Beacon Bldg., Tulsa.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Outer Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

FOR SALE OR TRADE
Three complete strings of cable tools at Hobbs, New Mexico. All nearly new and first class condition. Will sell or trade for royalties, leases or oil payments. Write or phone Weston Payne, LD 365, c/o Anderson-Prichard Oil Corporation, Oklahoma City, Oklahoma.

WANTED

50 Portable Air Compressors. Give complete description, name plate reading and price wanted.
P. O. BOX 78,
Kansas City, Mo.

10 REBUILT Oxweld Cutting and welding Outfits—Torches, Gauges. Reasonable. Service Co., 3732 Cedar Avenue, Cleveland, Ohio.

SEVERAL bargains in lathes, shapers, drill and punch presses. Also woodworking machinery, welding equipment, air compressors, motors and DeVilbiss paint spray outfits. The Southern Supply Company, Dallas, Texas.

GAS METERS
Used Westcott, Emco and Foxboro orifice Meters. Large capacity Iron Case meters. George R. Milner, Okmulgee, Okla.

FOR SALE: Wax plant, all Carbondale equipment, consisting of two filter presses, 48" plates, ½" rings and new blankets. Motor driven spiral conveyors, 20 ton generator, 20 section chilling machine, barreling machine and all necessary pumps and equipment for complete operation. Address Box H-143, The Oil and Gas Journal, Tulsa, Oklahoma.

Diesel Engine for Sale. 225 H.P., 360 R.P.M. Chicago Pneumatic Tool Engine Direct Connected to G.E. 2,300 Volt, 187 K.V.A. Generator. Purchased Summer 1933. Run less than thirty-five hundred hours. Engine junk. United Power Company, 1105 First National Building, Oklahoma City, Oklahoma.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Financing

PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Seventh Floor, 1237 Market St., Philadelphia, Pa.

JAMES E. MILLER, 604 W. Seventh St., Tulsa, Okla., will aid in financial marketing problems. Fee basis.

Incorporations

DELAWARE CHARTERS — Fee small; submitted forms. Chas. G. Guyer, Inc., 901 Market Street, Wilmington, Del.

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Mailing Lists

ROYALTY OWNERS
Names and addresses in any State. Royalty Lists, Box 105, Ft. Worth

OF ROYALTY investors by deed, guaranteed. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

Maps

UP-TO-DATE OWNERSHIP MAPS all active West Texas Counties and east half Lea Co., N. M. Send $1.00 for new map of State of Texas and Eastern N. M., showing oil and gas fields.
ZINGERY OIL MAP CO.
Fair Building, Fort Worth, Texas

Leases—Production

OIL PRODUCTION and leases for sale. N. R. ROBERTS, 1630 Glenarm St., Denver, Colorado.

NEW LEASE 70 ac. 18-6N-2W and 100 ac. 11-6N-3W, McClain County, Okla. Joe P. Crawford, fee owner, Oklahoma City, Oklahoma.

Young County once again hot spot in North Texas, 160 acres offsetting production. No cash required except for drilling. E. S. GRAHAM, Graham, Texas.

Leases—Production

DRILLING BLOCKS

On account of my radio programs, more blocks are being offered on development contracts than I can handle. Wish to connect with brokers or groups interested. I will assemble, title, geologize, validate and furnish all kits including maps, reports, documents and credentials. Will furnish rig and superintend drilling if desired. Contact!

W. H. VERNOR
Eagle Pass, Texas
(XEPN, 590 kc.
6 a.m.—8 and 10:30 p.m., e.s.t.)

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

LEASES and Royalties near drilling wells. $10.00 per acre and up. Write or wire G. E. Fisher & Co., 518 Key Building, Oklahoma City, Oklahoma.

WE BUY, sell lands, leases, royalties, oil stocks, anywhere. Lands, $2 per acre, up. Leases, 25c per acre, up. Free list. Write your needs. American Investment Co., Esperson Building, Houston, Tex.

Oil leases or Royalty, Drilling Propositions anywhere in Central Oklahoma.
I. H. TOWNSEND
P. O. Box 603, Shawnee, Okla.

FOR SALE — 261 acres oil and gas lease near Cheneyville, Louisiana, about 1½ miles from producing oil wells. Address Box H-140, The Oil and Gas Journal, Tulsa, Oklahoma.

Write me for oil producing properties, drlg. blocks, leases, royalties, Louisiana. G. Lucas, 208 Milam St., Shreveport, La.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

CLASSIFIED RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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17-19—New York, American Institute of Mining and Metallurgical Engineers.

18-19—Des Moines, Iowa, Iowa Petroleum Association, Hotel Fort Des Moines.

20-21—Wichita, Kans., American Petroleum Institute Mid-Continent District spring meeting.

25-27—Columbus, Ohio, Ohio Petroleum Marketers annual convention and marketing exposition, Deshler-Wallick Hotel.

19-21—New Orleans, La., Southern Gas Association Annual Convention and A.G.A. Sales Conference, Roosevelt Hotel.

March

4—Pittsburgh, Pa., American Society for Testing Materials, regional meeting, Wm. Penn Hotel.

11-12—Boston, Mass., Oil Men's Association of New England.

12-13—Boston, Mass., Oil Men's Association of New England, Copley Plaza Hotel.

18-19—Indianapolis, Ind., Indiana Independent Petroleum Association, Inc., spring convention and refiners' and suppliers' exhibit, Hotel Severin.

19-21—Tulsa, American Association of Petroleum Geologists, twenty-first annual meeting.

April

9-10—Shreveport, La., American Petroleum Institute, Division of Production, southwestern district, Washington-Youree Hotel.

11-13—Tulsa, Petroleum Industry Electrical Association.

13-17—Kansas City, Mo., American Chemical Society, Petroleum Division, Symposium on Motor Fuels.

14—Los Angeles, Calif., A.P.I., Division of Production, spring meeting.

14-18—Detroit, Mich., National Oil Burner Show, Oil Burner Institute.

16-17—Detroit, Mich., American Institute of Mining and Metallurgical Engineers, Open Hearth Conference.

16-18—Cleveland, Ohio, National Petroleum Association, semiannual meeting, Cleveland Hotel.

20-25—Houston, Tex., Oil Equipment and Engineering Exposition.